JOURNAL of GEOGRAPHY

for Teachers of
ELEMENTARY,
HIGH SCHOOL
and COLLEGE
GEOGRAPHY

Volume LX

October, 1961

Number 7

PUBLISHED BY

A. J. NYSTROM & CO.
THE NATIONAL COUNCIL FOR GEOGRAPHIC EDUCATION
THOMAS FRANK BARTON, EDITOR

A geography of
world regions
as they exist today . . .

WORLD GEOGRAPHY
For High Schools

by Mary Viola Phillips

Written in a simple and straightforward style that students find easy to read, WORLD GEOGRAPHY FOR HIGH SCHOOLS features . . .

- ✓ Development of world patterns with emphasis on population changes
- ✓ Problem-centered discovery of geographic relationships
- ✓ More than 100 maps including:
  - Full-color physical-political
  - Land use
  - Locator
  - World Resources
- ✓ 263 photographs illustrating specific ideas and activities or developing a general theme
- ✓ 8 work units: World Patterns, North America, South America, Europe, Africa, Asia, Pacific, and Polar regions.

The John C. Winston Co., *a division of*

HOLT, RINEHART AND WINSTON, INC.

383 Madison Avenue
New York 17, N.Y.

Crocker Park, Box 24400
San Francisco 24, Calif.

Mention the JOURNAL—It Assures Service

The JOURNAL *of* GEOGRAPHY

CONTENTS FOR OCTOBER, 1961

Articles

The Stature of Geography: Stake and Status.
By Alfred H. Meyer 301

Dr. Meyer, Professor and Head, Department of Geography and Geology, Valparaiso University, has held numerous positions in the NCGE, AAG, and various Indiana organizations such as the Academy of Science and the Academy of Social Sciences. His numerous articles appear in various subject matter and educational publications. His research specialties are regional Historical Geography, Manufactural Geography and Geography in Education.

Geography in the English School.
By William Macdonald 310

Mr. Macdonald took an M.A. at St. Andrews University, Scotland in 1949 and entered the Royal Air Force as an Education Officer. In 1954, he left the RAF and accepted a teaching post in Harrogate, Yorkshire where he has remained. Today he is Head of the Geography Department in the Secondary Technical School. During the academic year 1960-61, he was on exchange in Jersey City, New Jersey, teaching Commercial Geography and Economics in a high school.

The Population Prospect in Monsoon Asia.
By Wilbur Zelinsky 312

Dr. Zelinsky is Professor of Geography at the Southern Illinois University. His specialties are population geography, anthropogeography, and Anglo America.

The Role of Introductory Geography Courses in College Curricula.
By Albert W. Brown 321

Dr. Brown, formerly Acting Head, Geography Department, Eastern Illinois University and Head, Geography Department, Eastern Michigan University, is now Dean, College of Arts and Sciences, Eastern Michigan University.

Making Meaningless Quantities Meaningful.
By Wesley Calef 326

Dr. Calef is currently Professor and Chairman, Department of Geography, University of Chicago. His latest publication, *Private Grazing and Public Lands*, University of Chicago Press, appeared last winter.

The Importance of Geography in the Curriculum.
By Woodson W. Fishback 329

Dr. Fishback, currently on leave from the Deartment of Educational Administration and Supervision, Southern Illinois University, is State Coordinator of Curriculum in the Office of the Superintendent of Public Instruction, Springfield. In this position he is Director of the Illinois Curriculum Program, for Grades K-14.

Elementary and Junior High School

Geographic Readiness in the Kindergarten.
By Helen DeSart and Unabelle Trytten 331

Mrs. DeSart and Miss Trytten are both kindergarten teachers who with years of teaching experience know how to challenge the minds of children and how to present subject matter in which children are interested.

General

National Council at Work 335

Geographic Materials Received 338

Book Reviews 299, 339-342, 344

Contents of the JOURNAL are indexed regularly in the *Educational Index to Periodicals*.

Authors alone are responsible for opinions and statements in the JOURNAL.

PRINTED IN THE U.S.A.

The JOURNAL *of* GEOGRAPHY

THOMAS FRANK BARTON, *Editor*
GEORGE J. MILLER, *Assistant Editor*
Indiana University, Bloomington, Indiana

Associate Editors

EARL B. SHAW, Assumption College, Worcester, Mass.
NEVILLE V. SCARFE, University of British Columbia, Vancouver
R. S. FUNDERBURK, Central Washington College of Education, Ellensburg
MARY VIOLA PHILLIPS, University of Pittsburgh
JOHN W. MORRIS, University of Oklahoma
ROBERT C. KINGSBURY, Indiana University
ZOE A. THRALLS, University of Pittsburgh
HENRY J. WARMAN, Clark University
CLYDE F. KOHN, University of Iowa
OTIS W. FREEMAN, Apt. 306, 2609 West Montlake Place East, Seattle 2, Washington
MAMIE L. ANDERZHON, William Beye School, Oak Park, Illinois
JEWELL PHELPS, George Peabody College, Nashville, Tennessee

National Council for Geographic Education

JEWELL PHELPS, *President*, George Peabody College, Nashville, Tennessee
LORRIN G. KENNAMER, *Secretary*, University of Texas, Austin, Texas

---

SUBSCRIPTION TERMS

The subscription price is $5.00 a year payable in advance. The price of single copies is 60 cents. Postage prepaid on subscriptions from the United States and dependencies. All other countries in the Postal Union add for postage 70¢ on annual subscriptions (total $5.70 plus exchange), on single copies 5¢ (total 65¢). All subscriptions are payable in United States Dollars. Where payment is made in other than United States currency, add 45¢ additional for exchange. Postage to countries in South America remains the same (55¢), but the exchange rate must be added.

The JOURNAL is the official organ of the National Council for Geographic Education and is sent to all members. The annual dues, $5.00, are payable to the JOURNAL of Geography. Extra postage rates for copies sent to foreign countries should be added to the membership dues. Make all remittances payable to the JOURNAL OF GEOGRAPHY, in postal or express money orders or bank drafts. Send payments to Miss M. F. Sweeney, A. J. Nystrom and Company, 3333 Elston Avenue, Chicago 18.

Send manuscript and books for notice or review to the Editor.
Send orders for back numbers to JOURNAL OF GEOGRAPHY.

Published monthly except June, July and August
PUBLICATION OFFICES: CURTIS REED PLAZA, MENASHA, WISCONSIN
Business Correspondence, Membership Dues, and Subscriptions may be sent to

Publication office or to

A. J. NYSTROM AND COMPANY
PUBLISHERS, JOURNAL OF GEOGRAPHY
3333 ELSTON AVENUE, CHICAGO 18

Second-class postage paid at the Post Office at MENASHA, WISCONSIN, under the Act of March 3, 1879.

JOURNAL OF GEOGRAPHY PRIZE TO AUTHORS

Annually a Geographic Education Prize of $25.00 is awarded for outstanding articles published in the JOURNAL. In the even numbered years the prize is for the Elementary level and in the odd years for the High School level.

MH COLLEGE DIVISION

Two New Books

PRINCIPLES OF CARTOGRAPHY

By ERWIN RAISZ, formerly of the Universities of Florida and Virginia, and of Harvard University. *The McGraw-Hill Series in Geography.* Available in January, 1962.

Smaller, and somewhat simpler and more practical than Raisz's GENERAL CARTOGRAPHY, this text is intended to help students understand the language of maps; enable them to draw their own maps for theses and publication; and give them a foundation for more specialized work if they desire to become professional cartographers. Covers the basic concepts of the whole field, from which selections can be made for individual needs.

THE GEOGRAPHY OF ECONOMIC ACTIVITY

By RICHARD S. THOMAN, Queens University, Ontario. *The McGraw-Hill Series Geography.* Available in January, 1962.

An introductory textbook designed for the first course in economic geography. The divisions between technically advanced and underdeveloped countries and between Communist and non-Communist realms of influence are emphasized in the process of trying to understand more fully the location and functioning of economic activity in the various parts of the world. Avoiding an encyclopedic recital of elementary economic and geographic facts, the author develops "a definition of the field" and applies the definition to selected world patterns of economic activity.

McGraw-Hill Book Company, Inc.
330 W. 42nd St., N.Y. 36, N.Y.

MH SEND FOR COPIES ON APPROVAL

BOOK REVIEW

May Edel. **The Story of People.** Little, Brown and Company, 34 Beacon St., Boston 6, Mass. Illustrated by Herbert Danska. 197 pages with maps, bibliography, and index. $3.00.

This splendid little volume, now in its eleventh printing, is designed basically for young readers of 12 years of age and over. If only *The Story of People* could be read by every adult as well!

The subtitle, "Anthropology for Young People," indicates the purpose and objectives of the book. There are many interesting facts; however, Mrs. Edel emphasizes concepts more than facts. She does so in a very interesting and effective manner.

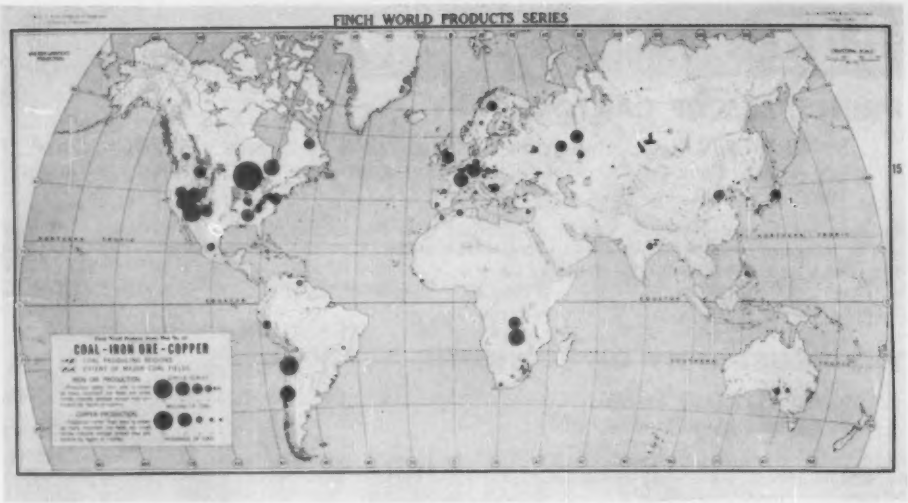
The theme of May Edel's book seems to be that all men are different, and yet very similar. Intelligence and abilities are not parcelled out to any one "race" or group. Some peoples are less advanced, in certain respects, either because they live in more limited physical environments or because they have not been able to meet or exchange ideas with other peoples.

Chapter I, entitled "Papa Franz," tells how Franz Boas became the "father of anthropology." May Edel, a professional anthropologist herself, studied under Franz Boas. The best ethnological study in this book is that on the Bachiga, an African tribe among whom Mrs. Edel lived and worked for a year. There is also an excellent description of the Eskimo way of life. The author gives accounts of the Australian aboriginees, the Indian fishermen of the Pacific Northwest, and Pueblo Indian farmers.

A few chapter headings serve to indicate the scope of Mrs. Edel's book: "A World-Wide Laboratory," "People are Different," "Man the Hunter," 'Man the Farmer," "Man the Metalworker," and "Does 'Race' Make a Difference?"

Herbert Danska's illustrations are superb in both the artistic and the educational sense. There are two simple but effective maps: one depicts the economics of the world's population at about the time of Columbus; the other shows some of the trade routes of Europe and the Near East "along which early civilization flowed." It concludes with an excellent bibliography of anthropological books for young readers.

Indiana State College DONALD J. BALLAS
Indiana, Pennsylvania



TEACH WITH NYSTROM WORLD PRODUCTS MAPS

Here is a comprehensive picture of distribution of the world's major agricultural and mineral resources . . . presented in a series of eighteen large (50 x 32-inch) colorful wall maps. The current edition has been recently revised to incorporate the latest available data on production and distribution. Primary and secondary production areas are shown for such basic products as oil, iron ore, corn, wheat, and rice. The areas favorable for production and development of resources can be quickly and easily identified. Each map presents basic reference material as well as valuable information to supplement geography textbooks.

36 Mounting. Set of 18 maps, on manila stock, in chart head, with tripod $65.50

02 Mounting. Single map on spring roller with steel board and dustproof cover $13.25

Have you seen Around the World, our free in-service publication for geography teachers? In the current issue, a specialist in geography curriculum demonstrates how World Products maps can be used in environmental relationship studies. To receive a sample copy, write today for pamphlet No. JG-1061.

TITLE	NO.
Average Annual Rainfall	FW1
Density of Population	FW2
Principal Uses of Land	FW3
Wheat and Rice	FW4
Corn and Rye; Rubber	FW5
Barley, Oats, Grain Sorghums, Millets	FW6
Vegetable Fibers	FW7
Vegetable Oils	FW8
Starch Foods	FW9
Beverage Crops	FW10
Sugar and Tobacco	FW11
Fruit Crops	FW12
Cattle and Dairying	FW13
Sheep and Swine	FW14
Coal, Iron Ore and Copper	FW15
Petroleum and Water Power	FW16
Political Map and Ocean Trade	FW17
Railroads	FW18

A. J. NYSTROM & CO.

3333 ELSTON AVENUE • CHICAGO 18, ILLINOIS

Do Your Part—Buy From Our Advertisers

The JOURNAL *of* GEOGRAPHY

Copyright 1961, by the National Council for Geographic Education

VOLUME LX OCTOBER, 1961 NUMBER 7

THE STATURE OF GEOGRAPHY: STAKE AND STATUS*

ALFRED H. MEYER
Valparaiso University

DESPITE the fully considered advancement of geography and recognition of geographers in many areas, geographers and geography occupy a marginal position in the academic, societal, and political life of our country. Despite marked progress in geographic professionalism, wide gaps separate actual academic achievements and acclaim from illusory aspirations—and often our own equally self-deceptive illusive claims. Thus, of reports received (1959-60) from 1668 of the 1689 institutions solicited by Schwendeman, as many as 457 schools (27.4%) "report no formal work in geography." As few as 249 institutions reported "geography as a department or as an integral part of a department."[1] When less than 15 per cent have departmental status, global world affairs implications attributed to our subject and profession seem ironically down-graded. Similarly ironical is the fact that, while political geographers specialize in foreign affairs, only one geographer (representing 6 per cent) is listed among the eighteen persons who do field research work and write for the American Universities Field Staff reports, many of which are explicitly or implicitly geographic in character.[2]

Our total record, both statistical and inferential, commands a renewed challenge to clarify our status in the educational world and to establish in no uncertain terms geography's avowed stake in promoting its own distinctive intelligence of world affairs. In missile-metaphorical terms, we may say, geography has professionally risen off the launching pad, but so far has fallen far short of the orbit designed for it by the great seers of historic-geographic thought and by modern geography's legitimate claims to a respected position by virtue of its inherent and distinctive educational objectives.

Why this state of affairs? Why the inertia of professional acceptance in the secondary and college curricula in so many of the leading colleges and secondary school systems of our country? Why the continued misconceptions of the field and function of geography, construed even by the professional educators of our subject as dealing only with place-naming, statistical enumerations, and physical landscape descriptions? Why the still

* This article was read in part on November 25, 1960, in Cincinnati, Ohio, at the 46th Annual Meeting of the National Council for Geographic Education.

[1] J. R. Schwendeman, *Directory of College Geography of the United States* (assembled and edited by The Department of Geography, University of Kentucky, Lexington), × 1959-1960, p. 1.

[2] *List of Publications* (to September 1, 1959), American Universities Field Staff, 366 Madison Avenue, New York.

generally held illusion that, while other social sciences need specially prepared teachers and research workers, geography is strictly a rudimentary subject calling for little professional competence on any level of instruction? Why are the public and the press generally unaware that geographers are prepared to deal with social, economic, and political problems along with social scientists?

Commonplace as these observations have been in the experience of practically all geographers, we submit that mere periodic re-assessment of the situation is not enough to identify ourselves. We must aggressively address ourselves to "ways and means" of making our colleague scientists, professional educators, institutional administrators, business world, government, and, above all perhaps, the tax-paying citizen realize that community and world affairs cannot be fully grasped without geographic knowledge. Still ignored is the fact that geographic concepts and principles can no more be taught by non-professionally trained instructors of geography than can the concepts and principles of history or any social science field be taught without proper training in these areas.

Among the rectifying goals and procedures briefly assayed in this paper are: A spirited rededication to our profession; clarification of our nomenclature; greater emphasis on historical, demographic, political, planning, and other systematic geography which deal with vital community, regional, state, national, and international affairs; development of really functional institutional departments with close affiliations with the humanities and the social and natural sciences with which our subjects have strong institutional cognate relationships; proffering of professional guidance to the introduction and organization of geography departments in many schools now without geography—some of the largest in our land; effectuation of our interdisciplinary coordinatorship; exercising of leadership (we have been weak followers in the past) in organizing and otherwise promoting institutional interdisciplinary seminars and institutes on major topics of societal, economic, and political interest on all area levels. In other words, we need to re-examine our potential stature with a view of translating claims into realized challenges.

I submit that unless geographers strongly sponsor active geographic service in all relevant academic and public connections as well as dynamically strive to be resourceful research scholars, we shall fall short of our goal in up-grading geography and up-ranking the geographer to a position of acceptance and respectability.

I wish at the outset to make it very clear that our so-called "challenging" inventory and appraisal of our progress or lack of progress in geography in no way leaves unrecognized the many out-standing contributions that have been made by so many individuals, committees, state and national societies—including their publications. These have attempted to narrow the gap between the geographic claims for our field and the attainment of goals to which they are directed. Despite this fact, the gap persists, and critically so.

Some Questions

Have we on the whole won or lost ground, *relatively speaking,* as compared with the effectiveness of other curricular areas? For example, have our geographic enrollments on both the high school and college level and have the number of college geography majors increased in proportion to the total increase in high school and college enrollments? Are curricular expansion and increased requirements for state and institutional teacher certification of the same order as are those of other disciplines? Growth, of course, there has been, but the extent must be measured in terms of our great

backlog of deficiencies in both these areas. To what extent does the geography that is taught on both levels by professionally trained geographers compare with the subject as taught by the non-geographer? The simple statistic that more geography is being taught now than before is not of itself a hallmark of geographic progress.

Turning in general to extra-curricular expansions of geography in their application aspects, as for example, in business and government, here again we raise the question, have we made our leadership felt in those projects which have a distinctly geographic orientation, or are we continuing to serve as followers rather than leaders in extending our services? Have we, for example, taken the initiative and responsibility of participating in area planning education and planning administration as much as would normally be expected from a field which claims for its birthright area-integration study? Normally, non-geographically trained planners, public officials, and the average citizen do not see the full resource and space planning import based on intra- and inter-regional unified areal analysis as stressed by the geographer. Yet the geographer's role in the total planning of our cities, counties, and country at large is a distinctly minor one.

Our lack of an articulate policy of geography planning promotion is pointedly brought out by Professor Herman at Colgate: "Many geographers will consider that the proper pre-professional training is a concentration in geography. But the curious fact is that numerous public and private planning organizations do not even list geography as a preferred undergraduate concentration; instead, they look for majors in economics, architecture, engineering, sociology, public administration, and law."[3] The recent A. A. G. Committee on Geographers in Business reports that, while geography is "considered to be one of the better disciplines on which planning can be grafted," our curricular set-up on the whole leaves much to be desired to exploit this "natural" opportunity for geographers to make their civic and political influence felt in the community and in the nation at large.[4]

Claims and Goals

Regardless of the point of view of what geography is—whether human ecesis, science of chorology, the meeting of natural history and human history, or the systematic spatial analysis of human occupance through time—certain claims and goals are generally agreed upon. And, as previously stated, it is this issue with which we are now concerned. Even non-geographers, for that matter, recognize that man has to be *spatially* oriented to be liberally educated. Thus, among other criteria, Green rhetorically asks: "Does it follow, then, that a person *is* liberally educated in proportion as he is . . . possessed of the basic facts concerning the world of nature, human nature, and human society . . .; as he is freed from the tyranny of provincialism through temporal, spatial, and systematic orientation."[5] I ask: "If spatial orientation in the affairs of the world is an integral part of a liberal arts education, whose province to develop such orientation is it, if not the geographer, who claims this for his specialty, if he has a specialty at all?"

According to *Inventory and Prospect*, "Geography makes three kinds of contributions to learning: 1) it contributes to-

[3] Theodore Herman, "Undergraduate Preparation for a Planning Career," *The Professional Geographer*, XII, No. 2 (March, 1960), 10.

[4] Report of the Geographers in Business Committee, John W. Reith, Chairman, Association of American Geographers, "The Nontraditional Jobs of Geographers," March, 1960, p. 18.

[5] Committee appointed by the American Council of Learned Societies, Theodore M. Greene, Chairman, *Liberal Education Re-examined—Its Role in a Democracy*, Harper and Brothers, New York and London, 1943, p. 120.

ward a better understanding of the earth as the habitat of man by extending the findings of the other sciences; 2) it provides a means for testing the validity of certain concepts developed by the other sciences by applying them in particular places; and 3) it offers its own peculiar perspective to the clarification of the issues involved in problems of public or private policy."[6] It would be interesting to know to what extent these avowed distinctive geographic educational processes and services are actually a part of institutional awareness; and more significantly, to what extent these principles, however factually and fervently stated, are accepted by the public, by our school systems; by the government, and the business world.

In 1952, the International Geographical Union Congress, at its meeting in Washington, D.C., set up a six-member commission to study the problem of geography teaching in schools. This resulted from a proposal for a commission on educational geography which pointed to five essential contributions of geography to education:

"It presents a distinct point of view and brings natural science into the study of human affairs. It evaluates man's use of the earth. No other field equally develops the map. Geography offers a unique integration of the school curriculum in its emphasis on man-land relationships in specific places the world around."[7]

Claim 1. Geography presents a "distinctive point of view." How many non-geographers can tell what this "distinct point of view" of geography is?

Claim 2. "Brings natural science into the study of human affairs." I submit that the average social science teacher of today has no workable knowledge of climate, landforms, soil, plant or animal life, and minerals so as to observe meaningful processes in the natural element of the environment as they are related to the cultural landscape and regional resource evaluations.

Claim 3. "It evaluates man's use of the Earth." As someone has well said, strictly speaking there is no such thing as "physical" geography, or at least there should be no dichotomy between so-called physical geography and human geography; for even in so-called physical geography, the focus of geographic attention is on the natural elements *as resources used by man.* Again I ask, how many teachers both on the high school and college levels are prepared to teach economic geography in terms of man-land geographic processes which properly relate man's activities to natural resources, rather than make economic geography seem like a statistical cataloging of production of commodities?

Claim 4. "No other field equally develops the map." True, very true, and uniquely significant. Again I ask, how many teachers are prepared to discriminate the map-making elements that really are significant in interpreting physical and cultural landscapes and read into them and out of them problems and potentialities of land occupance?

Claim 5. "Geography offers a unique integration of the school curriculum in its emphasis on man-land relationships in specific places the world around." The uniqueness of geography's integrating function is well expressed in the report: "Schoolwork as presently conceived in some countries seems to over-emphasize sociological factors and under-emphasize the fundamental limitations of the physical environment on human life. Man tends to be separated from nature; the humanities separated from the natural sciences. Geography is disintegrated into human studies and earth science. Some as-

[6] Preston E. James, and Clarence F. Jones, editors, "Geography as a Professional Field," *American Geography, Inventory and Prospect,* published for the Association of American Geographers by Syracuse University Press, 1954, p. 6.

[7] *Report of the Commission on the Teaching of Geography in Schools,* International Geographical Union, Eighteenth International Geographical Congress, Rio de Janeiro, August 9-18, 1956, p. 2.

pects of geography are made the humble handmaiden of history, others a minor part of general science. Geographers have never disagreed with the idea of correlating various areas of knowledge. That is the major function of their subject. Scientists in their studies naturally tend to neglect the effect of the human element on nature, while sociologists quite properly neglect the effect of nature on human life and activities. The function of geography is to make good this neglect."[8]

And so I ask again, if the unifying element of geographic education and its integration of interdisciplinary phenomena is so uniformly reflected in the writings of ancient and modern professional geographers, then why have we failed in convincing educators of the dire need of organizing curricula on this basis and supplying geographic competence in visualizing the concepts and techniques necessary to make history, sociology, economics, and political science meaningful in *spatial* terms?

I feel we have failed, in part, in this "unitary" objective because we have not sufficiently made clear to the educator the fact that, while the teaching of geography is meaningless outside a professional grasp of the framework of the natural environmental setting with which man's behavior must be interrelated, geography is *ethnocentric* instead of geocentric in its *ultimate* pedagogical mission. Thus, educational literature discloses the view that the correlative function of geography and history derives from the former as a study of "place" and "things" of the environment; the latter, as dealing with "purpose of human activity" and "institutions of society." But I submit that a properly organized geography curriculum is and should be no different from history in so far that the geographer like the historian is interested in interpreting the patterns of civilization, past and present, with a look to the future. Just as history may be thought of as a series of past epochal geographies of people, so the geography of present day regions may be considered current history. The learning situations and objectives are quite similar except that, while history focuses its human correlations on the time perspective, geography uses both natural and cultural intercorrelations in the perspective of space, past and present. If we are not doing this, then we have no claim to such subject matter designations as social or human geography, economic-commercial geography, political-historical geography, and the like. But if these designations do constitute legitimate instructional areas, then let us get out the word in unmistakable terms to our fellow educators.

General Education. With a few major and spotty exceptions, so-called general education programs reflect little if any recognition of the unitary spatial function whether checked against the curricula themselves, their syllabi, or the personnel responsible for the organization of the programs. Whenever subject matter references are referred to in a so-called general education program, a number of these do not even bother about including geography in the listing of college disciplines which have a contribution to make to the study of ancient or modern cultures.

Regional Geography. Though geographers "do not claim for their discipline exclusive rights to the regional concept . . . geographers are in general agreement that regional study is an essential part of their craft. . . . In geography, the subject of investigation and presentation is the areal differentiation of the face of the earth."[9] Thus, we have here the claim by the Whittlesey Committee on the "Regional Concept and the Regional Method" that geographers are *area* specialists, and this, of course, is reflected

[8] *Ibid.*, p. 2.

[9] James and Jones, *Op. cit.* p. 21.

throughout geography curricula and articles in geography journals. But, alas, geographers generally do not share, in a measure of importance in their field, responsible participation in the high councils of government in the formulation of policy in resource development (world, national, or regional); or in academic conferences organized for the purpose of considering major regional societal problems. Or even in regional community planning programs where grass roots inventory, mapping, and land-use analysis constitute the starting point of programming future land or resource use. Moreover, the best-known works in regionalism—that is, best-known among non-geographers, at least, seem to have been written by non-geographers. Recurring institutional continent colloquia may have as many as a half-dozen or more departments represented but the "areal science" is unrepresented.

Systematic Geography. New viewpoints of recent geography focus more and more attention on generic processes and genetic principles with the view of enhancing the status of geography as a science. Science, as here used, is not, of course, synonymous with natural science but with the total processes of learning in a systematic way the laws of our culture as they are related to the laws of nature. As "systematists" we seem to fare even much worse than as "regionalists" in establishing an authoritative base for recognition. The focus on the topical study of regional realities of the world, with the possible exception of economic geography, leaves much to be desired in college curricular offerings, in secondary education preparation, and in college trained personnel. Of all geography curricular weaknesses, this strikes us as about the most critical, for it is in this area of the political and the historical where we can best develop our academic, administrative, and public relations influence for curricular recognition, for certification of teachers in the social sciences, and for upranking the professional prestige of the geographer in world affairs. As Professor Jones points out in *Status and Trends* for 1952-57, enrollments in political geography declined from 12,375 in 1952 to 6,871 in 1957. After making due allowance for the lack of large ROTC classes in 1957, he expresses surprise at such great decline "in view of the general international situation that might be expected to stimulate interest in the political aspects of geography." Then Jones finds himself equally at a loss to understand "the reasons for the significant decline in enrollments in courses in historical geography."[10]

Last year's Schwendeman's directory (1959-60) indicates that out of 1,143 institutions reporting geography offerings of any kind, only 329 offered courses in the composite category of Political Geography, Geopolitics, Foundations of World Power, World Affairs, World Problems, Historical Geography, and influences on History.

Moving into Orbit

There is, of course, no short cut towards catapulting our subject into a respectable orbit already established by other disciplines which have long ago been securely fixed in the curriculum, and increasingly so now in our space age. One of the stock rejoinders by educators to the question, "Why isn't more real geography taught in high school and college?" is "We just can't find any room for it." As everyone I'm sure is now fully aware, including both geographers and non-geographers, plenty of room has been found in the curriculum when sufficient pressure has been brought to bear, including innovations which now sadly enough many educators recognize as frills rather than fundamentals in a truly

[10] Clarence F. Jones, "Status and Trends of Geography in the United States, Part II," *The Professional Geographer*, XI, No. 1 (January, 1959) 11.

liberal arts education. And, above all, we must now recognize the fact that various commissions appointed by state and federal departments of education are reassessing the values of many of these new innovations of past years; and it is, therefore, at this point that we urge our case to be heard, so that our subject which claims to be central to general education and at the core of all liberal arts learning will receive its proper share of curricular and certification recognition.

(1) First of all, we must demonstrate that we passionately believe in our subject as having a real mission in our space-race educational program. We must address ourselves aggressively to every administrative and promotional effort to achieve recognition necessary to enable our subject to function effectively. I submit that we should have a joint standing committee of the Association of American Geographers and the National Council for Geographic Education to survey every effective means to achieve this end. Teaching, research, and professional publication in any field, however scholarly they may otherwise be, cannot render the greatest public service unless the public is aware of the functions of that field. It is our conviction that lack of understanding of our field is our chief problem. Some geographers, like Alexander and Thompson, feel that, to start with, a correct concept of our field calls for a new name.[11] With the controversial issues proposing and opposing changing the naming of geography, as expounded in recent issues of *The Professional Geographer*, we are not here concerned. But what does concern us is the direct relevance, the motivation for such name-change, has to our present discussion. As long as geography to a non-geographer suggests merely place naming, product enumeration, the study of antiquities, or at best regional descriptions of the travelogue type, then our subject will continue to lack integral identity and professional acceptance comparable to those of other academic areas.

(2) We need to make a concerted attack on clarifying and amplifying our subject nomenclature. Disconcerting are the ambiguities, inconsistencies, and inadequacies in our terminology, as particularly typified by the most commonplace terms, *e.g.:* environment, topography, landscape, and the like. Geographers seem continuously to be struggling for a word that conveys the concept of the total natural-cultural environmental complex and man's place within it.

(3) A truly functional classification and affiliation of subject matter is important. Geography inherently is concerned with both natural processes and human processes in the interpretation of the environment ensemble. This totality of phenomena of areal man establishes geography's distinction of being logically the best discipline for integrating the knowledge normally taught in all the major liberal arts areas—the humanities, the social sciences, and the natural sciences. Since geography must normally operate administratively in one of these three traditional divisions, it would seem most expedient to affiliate the geography department with that division or divisions where we can best realize the closest coordination in the study of man and his works in the combined space-time context.

We submit that the basic weakness in curricula construction today is in the systematic phase of areal study. In the newer viewpoints of geography of later years, processes, principles, concepts, and problems are increasingly stressed. However, many of the regional courses as now organized seem to pay only incidental attention to interpretative features and are

[11] J. W. Alexander, "Geography: As Some Others See It," *The Professional Geographer*, XI, No. 4 (July, 1959 2-5; and Kenneth Thompson, "Geography—A Problem in Nomenclature," *The Professional Geographer*, XII, No. 2 (March, 1960) 4-7.

still largely statistical, enumerative, and descriptive in character. And the dearth of systematic courses—less than 25 per cent—no doubt in large part accounts for the mediocrity of much of our elementary and secondary teacher preparation in geography.

We agree that Trewartha was absolutely right when he said in his presidential address before the Association of American Geographers in 1953, that population in geography is one of the most neglected yet essential fields. He placed it diagrammatically, you will recall, at the very apex of the three angled figure of our subject matter organization. It occurs to us that it is in connection with this systematic phase of our subject that we can best inter-relate areal cultural and natural processes. And it is in this connection also that the geographer can best formulate earthspace concepts of man in coordination with the concepts developed by the historian, political scientist, economist, and specialized demographer.

(4) We submit that one of the strongest features of the A.A.G. and N.C.G.E. programs of latter years is the increasing practice of programming a joint session with other professional groups with whom we share common academic interests. But here again, there is much room for improvement. I cannot conceive of a better way to insure an up-ranking of our stature than to share regularly joint sessions with the demographers, historians, political scientists, economists, conservationists, planners, and others upon whose fields we continually impinge.

(5) If geographers are area systematists, as they always claim to be, then why should we not initiate interdisciplinary institutes on the Western and the non-Western world affairs? Why must we wait for non-geographers to organize such programs? In the same way, the geography profession's prestige on the practical side would be greatly up-ranked if geographers would arrange area planning programs. Press coverage resulting therefrom give geography the kind of publicity that we need not only to help remove geographic illiteracy, but to dispel also the geographic illusion that our field is nothing more than a factual encyclopedic place-naming and statistical-memorizing subject. Educational geography institutes might also be arranged regionally or institutionally to which would be invited university and college presidents, prominent educators and administrators of teacher certification programs. This would help establish academic intelligence on the true status of our subject matter in the mind of the educator as well as sharpening our guide-lines in rectifying our own deficiencies. While regular committees are now actively at work in revising high school and college curricula, particularly in the area of the sciences, mathematics, and languages, motivated by our space rocketry, it is imperative that some concerted action be taken to bring our curricula up-to-date on earthspace discipline.

(6) Another aspect of our new space age is the implementation of research in science, particularly as featured by the numerous grants from foundations such as the National Science Foundation, the Ford Foundation, the Rockefeller Foundation, and others. It would be interesting to know what percentage of such grants actually involving areal studies are shared by the geographer. Of special interest here is the increasing number of areal publications by people who are not recognized as professional geographers. Geographers have always reognized the legitimacy of such procedure, of course, since geography itself is a comprehensive field of investigation of other discipline phenomena. It is to be expected, therefore, as pointed out in *Inventory and Prospect*, that "Scholars who are identified professionally as geographers are not the only ones who make use of the geo-

graphic method or who study and write what is, in fact, geography. Geographic writing is done by anthropologists, economists, sociologists, political scientists, botanists, zoologists, geologists, business men, and many others. . . . These same scholars should be encouraged to make use of geographic concepts and geographic methods, and to do so with a similar degree of expertness."[12] But the fact remains that every subject must be identified by its own special nature and functions primarily promoted by its own specialists. Accordingy, geographers cannot escape the responsibility of leading the way in areal study whether it is in teaching, research, or publication. If they can't do that, then we should no longer press the claim that geography's distinctiveness lies in the analysis of natural-cultural areal reality.

Implementation

If the previously stated principles are our policy then, summarily, how can we go about implementing them to attain our goals? A few suggestions:

1. Change the educator's and the public's image of geography. Difficult as this may seem, apart from changing the name of geography itself, the substitution for geography and geographers of the adjectival terms, such as economic geography and economic geographer, political geography and political geographer, historical geography and historical geographer, would, in our opinion, lend both clarity and distinction to the field.

[12] James and Jones, *Op. cit.*, p. 7.

2. Stress in our college curricula and research the geographic perspective of social, economic, political, and historical concepts, processes, principles, and problems.

3. Evaluate the directory data we already have and explore for such supplementary data as we further need to assess countrywide our institutional strengths and weaknesses, to determine just why some of our largest colleges and high schools are wholly or largely without professional geography.

4. Promote regularly institutes and symposia on all levels—local, regional, national, and international—which, like the Wenner-Gren Foundation for Anthropological Research, bring together the geographer and his colleagues to discuss community and world affairs in the context of problems that really matter.

5. Maintain constant contacts with state, institutional, and educational agencies dealing with the ever-changing curricular and teacher certification programs.

6. Set up an inter-N.C.G.E.-A.A.G. committee that will not only co-ordinate, as is now the case, a segment of our joint promotional educational objectives, but widen the base as well to include promotional activity related to the total problem of expanding our academic services and public influences.

7. Implement the sought goals through publicity, by the committee, of programs designed to reach all agencies to whom directed appeals for specific programs are relevant.

THE 47TH ANNUAL MEETING WILL BE IN PHILADELPHIA

The 47th Annual Meeting of the National Council for Geographic Education will be held in Philadelphia, Pennsylvania, November 24 and 25, 1961. The Benjamin Franklin Hotel will be the headquarters.

GEOGRAPHY IN THE ENGLISH SCHOOL*

WILLIAM MACDONALD
Secondary Technical School, Harrogate
Yorkshire, England

I WONDER if any of you read about one of the latest developments in cultural exchange between our two countries—it seems that London's Savoy Hotel has sent over to New York its chief bartender to exchange technological information with his colleagues over here. Perhaps he may be called upon to give a short talk on "The Drinking Habits of the English" or some kindred subject which would probably make more headlines than geography in English Schools, my subject for tonight.

For the young student of geography, one of the most tantalizing aspects of the subject must be that for every expert in this field, there is a different definition of the subject. Some look upon it from the humanistic viewpoint, some from the scientific, some the economic, some the political; perhaps the early lack of unanimity among the authorities on the subject accounts for the fact that for years, up to the 1930's even, geography in the United Kingdom was a Cinderella subject, the main object of which was to acquaint the pupil with a knowledge of the map of his country and of the world. I well remember my own years at Secondary School in Scotland, when woe betide us if, after due preparation, we could not go round the map of Scotland naming all promontories, rivers, mountains and hills ranges, countries and cities. Failure to accomplish this would inevitably bring down the wrath of the teacher, in the form of the tawse—a unique Scottish deterrent—used even today—a 30" long leather belt, of two to five thongs wielded with vigor against all miscreant hands.

* A paper presented at a Geography Symposium held at the Jersey City State College in April, 1961.

Rapid Growth in Geography Students

Even at many Universities it was impossible, before the war, to take a full *Honours* course in geography. Happily I am able to report that the situation is now changed—the wheel has gone full circle, in fact—and geography has now attained its proper place as a major subject in Scottish and English schools, elementary and secondary, and in our Universities. This can be proved by quoting the statistics for the Secondary School students sitting the Ordinary level of General Certificate of Education—our national external examination, set and marked by the University Boards, and the culminating point in many students' lives. In the summer of 1959, geography ranked fifth in the number of candidates presented—with a total of 113,167 students, compared with 223,000 for English, 160,000 for Mathematics, 146,000 for English Literature, and 125,711 for French.

Substance of Geography

In terms of mere quantity, geography is thus now firmly established in our schools. But what is the substance of this school geography? And what is its contribution to education?

Purely topographical geography has long been outmoded, though we still regard a mastery of topographical detail as an essential requisite of geography study. Before studying the present-day substance of the course, let me first summarize our aims: (1) to open the students' eyes to the geographical aspects of the life that goes on *around* them, (2) to give the *same* understanding of life in *unfamiliar* places, (3) to build up some knowledge of geographical principles, (4) to develop in the pupils certain techniques of

study, and to train him to use his powers of observation, (5) to contribute to general education through giving exercises in careful thought and exposition in relation to human affairs, and (6) to help the pupils to become fair-minded, intelligent citizens of their home area, their country, and the world.

In my opinion, no other single subject in the Secondary School syllabus has, or can attain, such ideals, and it is therefore gratifying to be able to state that in most English Secondary Schools *geography teachers* are given a fair opportunity to accomplish their aims.

I should mention here that I teach in a Secondary Technical School in Yorkshire. This is one of the four types of Secondary Schools in England today, the other three being: (1) the traditional Grammar School or Academy which takes approximately 20 per cent-25 per cent of school children, *i.e.* those most academically inclined; (2) the Secondary Modern School, which is still largely in the experimental stage, which takes approximately 50 per cent of our children, trying to provide a curriculum more suited to the needs of the less academic pupils; and (3) the Comprehensive School, which is what its name suggests, and which takes all the children from a given area, and "streams" or grades them only after they enter the school.

Our Technical School takes in those who elect for a career in technology, or commerce and the like, but provides also the same general education as the Grammar School. We have approximately 450 pupils—increasing to 700 in the next five years. They come in at the age of 11+, and after one year in our school, we stream them on the results of their first year's examinations and class work, with the chance of promotion or demotion at all steps thereafter.

May I interpose here and say that, after eight months of endeavoring to teach heterogenous groups in Jersey City, I am still in favor of streaming.

We have our pupils until they are at least fifteen years of age—most of them stay until they are sixteen, and we hope, in a few years, to encourage them to undertake advanced study and remain until they are eighteen years of age.

The geography course in our school consists of two or three periods per week for at least three years, and is compulsory for all our students. Most of them elect for the full five year course leading to the General Certificate of Education. In their fifth year, they have four periods of geography a week—a ratio which compares very favorably with kindred subjects such as history.

When a student comes to us, at 11+, from the Elementary School, I expect him to have acquired: (1) some knowledge of basic global facts, (2) some knowledge of conditions of life in "typical areas," *e.g.*, deserts or equatorial forests, (3) an elementary geographical vocabulary, (4) a broad acquaintance with world topography—distribution of oceans and continents, great rivers and mountain ranges, and (5) a broad understanding of maps.

The organization of the five year secondary course is roughly like this:

In the first year we proceed from the familiar to the unfamiliar, *i.e.*, we study the Home Area first, followed by other regions of the United Kingdom, using elementary textbooks, simple atlases, and introducing the technique of drawing sketch maps and cross-sections.

From there, in the second, third, and fourth years, the pupil undertakes a systematic study, region by region, of all the continents, beginning with Africa and Australasia, and finishing up in Europe and the United Kingdom once more.

We spend about a term and a half studying the United States of America, dividing it into about eight regions for simplification.

Each year, I introduce a little Ordnance Survey map-reading, and physical

geography, usually in conjunction with field trips.

In the fifth year, the students reach the crucial point of their school career. This is the year in which they take examinations to qualify for the General Certificate of Education.

Examination

The paper in geography (Northern Universities) consists of a 2.5 hour paper (Oxford and Cambridge—2-2.5 hour papers) in which time the student has to answer five questions:

(1) one question on Ordnance Survey map-reading, (2) one question on General World Geography, (3) two questions on the British Isles, and (4) one question on a selected continent. It is a rather searching test of the student's knowledge, his ability to reason, and his ability to illustrate geographical points by sketch maps.

The examination is held in June, and the results are published in August. As I have already stated, geography now ranks, at the Ordinary level, as the fifth most popular choice of subject. There is also an "A" level examination which involves a further two years' study, and is undertaken by scholars wishing to go on to the University. In this, geography ranked seventh in the 1959 examination.

Methods

So much for the substance of the course; the methods we employ depend entirely on the individual teacher. I have at my disposal a wide range of graded textbooks and atlases, wall charts, projectors and epidiascope. All have their part to play. We make increasing use of field trips (especially to the nearby limestone scars of the Pennines), ship adoption, farm adoption schemes, television programs, and organized tours to Europe. These last are now a recognized part of the British educational scene—the sight of thousands of school children from all parts congregating at Victoria Station, London, each Easter, being a sight to make the most hardened teacher shudder.

For advanced students there are several research centers throughout the country at which they are to spend a week or two doing individual research.

In Conclusion

So much for our aims and the substance of our course. I began by saying that our subject is sometimes regarded as a science, sometimes as one of the humanities. Perhaps, in truth, our strength lies in this very point, that geography can provide a most satisfying bridge between science and the humanities, a bridge that no other subject can provide.

THE POPULATION PROSPECT IN MONSOON ASIA*

WILBUR ZELINSKY
Southern Illinois University

Among the many perplexing problems that face the world in the 1960's few are as serious in their implications as recent and prospective population changes in Monsoon Asia. Obviously, only the broadest demographic trends and the most basic questions in the shifting relationships between man and nature can be touched upon in a brief discussion of so immense an area, one in which no less than 1,500,000,000 persons, or well over half the human race, are domiciled. Fortunately, in this case necessity may become a virtue. In the fifteen years since 1945, the population trends and problems of the region have become sharply defined and deserve

* Based on a paper read at the November, 1960 meeting of the National Council for Geographic Education at Cincinnati, Ohio.

to be stated quite simply, however engrossing the details may be. We see a region where the sheer volume, if not the absolute velocity, of population change is unmatched in world history and where the crush of mankind against the limitations of society and a finite earth is imminent and terrifying. The population dilemma of Monsoon Asia threatens to become one of the gravest emergencies the world can expect before the end of the century; its theoretical lessons are fundamental; and its implications, both practical and theoretical, will be closely watched by those other vast reservoirs of demographic and economic perplexity—Southwest Asia, Africa, and Latin America.

The region in question comprises an array of archipelagoes and mainland territories from Korea southwest to Pakistan along the southeastern margin of Eurasia. A certain regional personality has been imprinted upon this part of the world by a shared set of climatic characteristics, a single pervasive mode of cultivation, almost horticultural in its intensity, and the unique, nearly universal status of rice as the dietary basis of its strongly agrarian societies. These elements of homogeneity are more than offset by an immense diversity of physical and cultural detail. In demographic terms, close scrutiny resolves high average density figures into a mosaic of extremely irregular settlement; the basic division between dense lowland and sparse upland occupation is subject to considerable local modification; the variety of racial, linguistic, religious, and social patterns is bewildering; and the political and economic development of the constituent nations has been anything but uniform.

Historical Trends

The lands of southern and eastern Asia have been subject to European control and influences to varying degree for some three or four centuries; but until the early years of this century the effects of these contacts on population patterns had not been particularly striking. It is true enough that in 1650, the earliest year for which we can make any educated guesses concerning world population distribution, Monsoon Asia had an estimated 313 million inhabitants and that the figure increased by 184 per cent to 890 millions in 1900; but the population of the world, and that of Europe and the Americas in particular, had been growing even more dizzily during the same interval. It is clear that the relative tranquillity brought about by Europeans, the improved means of transportation and marketing and other technological innovations, and a modicum of modern scientific and medical knowledge all contributed to fostering an average growth of something like 0.5 per cent annually. Since the beginning of the century, the rate of increase has greatly accelerated, until it now ranges from two to three per cent per annum in many of the countries involved. Thus, the total population of Monsoon Asia, which has nearly doubled in the past 60 years, may double again in something less than 40 years. Nonetheless, except for the radically lowered mortality that is responsible for this huge increase and a moderate amount of urbanization, the region had changed rather little demographically until after World War II—with the solitary exception of Japan. For many hundreds of years, Monsoon Asia has been inhabited principally by large numbers of peasants intensively farming small patches of land from which they seldom migrated, a youthful population among whom expectation of life at birth was probably less than 30 years and consistently high fertility was essential to countervail death rates fluctuating at high levels, a largely uneducated, illiterate, chronically sick, poorly clothed and sheltered population eating too little of a badly

balanced diet and leading a hand-to-mouth existence in which famine and epidemic were not unfamiliar visitors. Perhaps this is an overdrawn picture for some better sections of the region, but a rather restrained characterization for all too much of it.

The Changing Social and Political Situation

We are now finally entering a period of major qualitative, as well as quantitative, change among the peoples of Monsoon Asia. It is being ushered in by two sets of events: by the political transformation of the region from a collection of colonies and buffer states to a group of fully sovereign nations and by the ever hastening westernization, or modernization, of society and economy. Both these trends have, in turn, led to another phenomenon of vast importance to geographers and other social scientists: the "revolution of rising expectation." The peoples of Asia, having become independent, are anxious to press on and achieve a semblance of the prosperity, security, and generally better way of life they have learned exists elsewhere. Can they and will they? The answer depends on the available wealth of their lands but probably even more on the resourcefulness of their societies and leaders and the number and kinds of people who will take part in this difficult enterprise.

This new ferment is probably all to the good; but a number of negative factors must also be noted. National independence has coincided with the flight of invaluable administrators and technicians, at least in the case of former Dutch and French possessions. For North Korea, North Vietnam, and China it has meant leaping from colonial and semi-colonial bondage into the turmoil of communization. The ugly psychological, demographic, and economic wounds of civil war in Korea, Malaya, the Philippines, and Burma will take many years to heal. The centripetal tendencies of Indonesia cast serious doubt over its future prospects. Laos, Cambodia, and South Vietnam have yet to demonstrate real competence in self-government. The remaining enclaves of colonial territory—Western New Guinea, Portuguese Timor and Portuguese India, North Borneo, Macao, and Hong Kong—are latent foci of military infection. The semi-permanent tenseness in the Formosa Straits and along the India-Pakistan borders distracts the participants from more important labors. All these phenomena represent diversions of time, energy, and resources from the solution of the overwhelming population problems that threaten to engulf almost the entire region.

The Modernization of Monsoon Asia and Its Demographic Consequences

The process of modernization has begun at different times and has proceeded various distances in different directions among the nations of Monsoon Asia. In almost every case it has involved the introduction of advanced means of transport and communication, at least on a sample basis, a tentative start toward extensive urbanization, the genesis of the modern factory system in some centers, changes in the production and marketing of crops, at least the rudiments of a system of universal public education, and, most importantly, the appearance of modern drugs, vaccines, pesticides, and antiseptics, along with basic notions of proper hygiene, nutrition, and infant care, and the creation of some sort of public health service, with physicians and clinics accessible to a significant fraction of the populace. There has been, then—with or without any gain in per-capita income or general living conditions—a gradual, then a precipitate drop in death rates. The experience of Japan, not the first nation exposed to Europeanization, but the one where the process has run its course most completely and successfully,

is a case in point. From a crude death rate of 25.4 per thousand[1] in 1920, presumably well below the levels prevailing a century before, the index dropped to 16.4 in 1940, and then was halved again by 1955 to reach the figure of 7.8, one of the very lowest recorded anywhere in the world. Equally dramatic is the story of Ceylon where crude mortality rates plummeted from 20.3 in 1946 to 10.4 in 1954, a reduction of nearly 50 per cent within eight years. It is highly likely that a comparable cut in mortality has been occurring in mainland China during the past decade, but the statistics are fragmentary and unreliable. We do have credible evidence that crude death rates are approaching irreducible minima in Malaya, Singapore, Taiwan, and Hong Kong, with indices ranging from 13.4 down to 7.1. Throughout the remainder of Monsoon Asia, mortality is considerably higher, falling between the 19.4 reported for India and the 30.8 estimated for British Borneo, but still probably much below the hypothetical levels of one or two centuries ago.

Here it is necessary to insert a word about the population statistics of Monsoon Asia, another of the technological innovations imported from Europe. In a minority of instances, namely India, Pakistan, Ceylon, the Philippines, Malaya, Singapore, Hong Kong, and Japan, we do have reasonably reliable registration systems or good census enumerations covering the past several decades. Bhutan and the nations that comprise former French Indo-China have never had a population census; and regular population censuses of acceptable quality have been among the casualties of the troubled postwar period in Indonesia and Burma, where the last complete counts are dated 1930 and 1931, respectively, and Taiwan and Korea, where the departure of the Japanese has meant a deterioration in statistical services. The picture is brighter for China and Nepal, both of which enumerated their populations for the first time during the 1950's.

There is quite clearly a direct correlation between the degree of modernization of a given Monsoon Asian society and the reduction of its mortality levels. The remoter and more backward groups, such as those in the Outer Indies, Nepal, Laos, and Cambodia, have a relatively short life expectation; but those places which have been most thoroughly urbanized and industrialized or have otherwise enjoyed the close attention of the Western powers are now experiencing mortality conditions on a par with the best in the world. In the less advanced territories of Monsoon Asia, death rates continue to decline, and there are excellent reasons to anticipate further decreases for some years to come. The only exceptions to this statement appear to be the scattered, primitive hill folk who live outside the areas effectively controlled by any national government. Such large-scale death control would be most heartening if it were accompanied by reductions in the traditionally high fertility of Monsoon Asia, with a resulting stable or slowly increasing population total. This has happened in only a single nation within the region. Japanese crude birth rates, which had remained generally high, usually between 30 and 35, until the end of World War II, abruptly dropped from 34.5 in 1947 to 18.0 in 1957, the most spectacular recorded occurrence of its kind anywhere. Elsewhere, there is absolutely no convincing evidence of significant declines in the prevailing high fertility nor any reasonable expectation of any on the basis of available facts and demographic theory.

Population Projections and Impending Problems

A series of population projections prepared by United Nations demographers

[1] Rates in this paper are expressed in terms of numbers per thousand.

for the year 2000, which is as far as we dare venture into the future with our available techniques, postulates world totals swollen from the current 2,900,000,000 to values from 4,880,000,000 to 6,900,000,000 depending upon which set of assumptions concerning future behavior of fertility and mortality we choose to adopt. For Monsoon Asia in 2000, the low projection is 2,741,000,000, the medium, 3,661,000,000, and the high projection an enormous 4,017,000,000, or increases of between 80 and 164 per cent in a 40-year period. Again Japan provides the exception to the regional trend, for the best current opinion is that its population may level off during the closing years of this century or even begin a slow decline after reaching a total in excess of 100 million persons. For other individual nations, projections have not been made beyond 1980; but in every case, the expected increases are of great magnitude, falling between 75 and 190 per cent for the 1950-1980 period, following the medium projection, which is not necessarily the most plausible. For certain areas, such as Ceylon, Malaya, Singapore, Hong Kong, and Taiwan, with a combination of persistently high fertility and very low mortality, a doubling of the population every twenty years, or a ten-fold increase in about 67 years, would seem quite feasible, barring economic complications. Furthermore, it is altogether conceivable that future declines in mortality in India, Pakistan, Indonesia, and other nations of moderately high death rates, will be more rapid than foreseen in the most optimistic of current forecasts. Some notion of both the velocity and absolute volume of change implied by these projections is gained if we realize that the population of mainland China, tallied at 582,500,000 in July, 1953, now probably approaches 700 million.

Can the nations of Monsoon Asia possibly hope to accommodate such huge increments to their populations and, at the same time, make any headway in improving their economic condition? First of all, let us acknowledge the fact that Monsoon Asia has the largest supply of land in the world with optimal physical conditions for intensive food production. Nowhere else have so many peasants lived for so long in such vast numbers. We have already seen that Monsoon Asia has been able to quintuple its population in the past 300 years. This has been done by more intensive exploitation of the soil and the extension of cultivation to previously empty lands; but, with the inevitable exception of Japan, there has been little improvement in the lot of the individual, and real economic retrogression may have been widespread. Undoubtedly, this process can be continued for some decades in those fortunate lands well cushioned with large supplies of relatively good, unused land; and a great intensification in agricultural production is possible almost everywhere with the adoption of more advanced techniques.

Absolute saturation has not yet been reached in any part of Monsoon Asia, but it is difficult to see how it can long be postponed with the means on hand in Java, South Korea, or North Vietnam. The critically crowded sections of India and China can rely on migration to the cities and the less densely settled farmlands of these vast nations for immediate relief. Luzon and the more congested of the Visayan Islands can look to Mindanao for population outlets; and some of the surplus Javanese may plan on re-settling in Sumatra, Borneo, and other likely islands. No such expedients are available to Taiwan, Ceylon, or Nepal, all of which will probably suffer from acute population pressure by the end of the century. Burma, Siam, Malaya, Laos, Cambodia, and South Vietnam are in the enviable position of having reserves of farmland sufficient to last another fifty to one hundred years, taking into account the anticipated boom in population

MONSOON ASIA: POPULATION CHARACTERISTICS—I

	Population (in thousands)		% Change 1950–1958	Pop./km² 1958	Population Projections, 1980				% of Pop. Urban	% of Pop. in Metro-Areas of 100,000 or More (1955)
	1950	1958			Low	Medium	% Inc. 1950–80	High		
China	582,603 (1953)	669,000	14.8	69	799,900	970,000	66.5	1,287,000	15.2	7.3
India	358,000	397,390	11.0	121	561,600	603,100	68.5	681,600	17.3	8.8
Japan	82,900	91,760	10.7	248	—	102,729	23.9	—	37.5	39.8
Pakistan	75,040	85,635	14.1	91	144,491	151,657	102.1	169,908	11.4	5.2
Indonesia	75,002	87,300	16.4	59	130,970	138,518	84.7	159,728	—	8.0
Vietnam	22,352	26,600	19.0	88	42,293	44,626	99.8	49,131	—	9.9
South Korea	20,208	22,505	11.1	232	—	41,614	105.9	—	19.6	18.5
Philippines	20,150	24,010	19.2	80	47,569	50,840	152.3	57,032	24.1	12.5
Thailand	18,629	21,474	15.3	42	39,089	41,617	123.4	47,523	9.9	7.3
Burma	18,487	20,255	9.6	30	30,503	32,333	74.9	45,319	10.4	5.5
North Korea	9,083	8,000	−11.9	65	—	12,700	40.8	—	—	17.1
Nepal	8,170	8,910	9.1	63	—	13,070	60.0	—	—	3.0
Ceylon	7,547	9,388	24.4	143	17,227	18,327	142.8	—	15.4	9.7
Taiwan	7,478	9,851	31.7	274	19,93	21,272	184.5	—	—	21.3
Malaya	5,211	6,515	25.0	50	13,078	14,008	168.8	14,428	26.5	14.3
Cambodia	3,885	4,740	22.0	27	8,145	8,672	123.2	9,905	—	8.9
Hong Kong	2,260	2,748	21.6	2,713	—	5,000	121.2	—	—	100.0
Laos	1,310	1,690	29.0	7	2,342	2,488	89.9	2,876	—	0
Singapore	1,062	1,515	42.7	2,607	3,074	3,295	210.3	—	80.0	100.0
British Borneo	958	1,141	19.1	5	1,719	1,829	90.9	2,087	11.8	0
Portuguese India	637	648	1.7	154	750	875	37.4	1,000	—	0
Bhutan	600	650	8.3	13	800	900	50.0	1,000	—	0
Portuguese Timor	441	490	11.1	33	746	793	79.8	913	—	0
Macao	188	210	11.7	13,125	—	—	—	—	—	100.0
TOTAL	1,322,201	1,502,425	13.6	80	—	2,280,263	72.5	—	—	10.5

Sources: United Nations, *Demographic Yearbook;* United Nations, *The Population of South-East Asia . . .* (Population Studies No. 30), 1958; United Nations, *The Population of Asia and the Far East* (Population Studies, No. 31), 1959; International Urban Research, *The World's Metropolitan Areas*, Berkeley, 1959.

numbers; but even they will eventually experience land hunger. The future of Singapore and Hong Kong is a matter of trade relations and market areas, rather than local resources, and is quite unpredictable. Virtually all the meager overseas outlets for emigrants from Monsoon Asia have closed their doors in the recent past; and even in the highly unlikely event of a mass exodus to the last empty lands of the globe, any relief in population pressure at home would be both temporary and slight, creating many more problems overseas than it would solve at home. Thus the outlook for Monsoon Asia, extrapolating current population trends and economic systems into the future, is for a disastrous multiplication of people beyond the available means of subsistence. Such demographic bankruptcy may be reached within twenty years in some areas or only after a century or more elsewhere; but it would appear unavoidable everywhere. If it does occur, it is likely to be accompanied by every possible kind of social, political, and military unpleasantness, a return of epidemics and famines, and thus, a resumption of the ancient pattern of high mortality.

Possible Solutions for the Population Dilemma

What are the alternatives? Japan appears to have found a solution to its problems, despite shattering wartime experiences, in intensive commerical and industrial development, along with a marvelously thorough, rational exploitation of its small store of arable land. This is a qualified happy ending, however, inasmuch as Japan's prosperity, like that of several Northwest European nations, must remain permanently precarious, at the mercy of its trading partners and suppliers of raw materials. In any event, it is doubtful whether the Japanese model (essentially a revamped British design) is applicable to other nations in Monsoon Asia. The opportunities for large-scale commercial and industrial aggrandizement that Japan seized in the latter years of the 19th Century have vanished, never to return.

Three nations—China, North Korea, and North Vietnam—have chosen to emulate the Soviet model, and it is not improbable that other Monsoon Asian nations may strike out on the same path. Both China and North Korea may well have sufficient natural and human resources to transform themselves into the same sort of urban-industrial society of moderately high living standards that we now find in the Soviet Union. Certainly, the Chinese regime, ruthless, extremely vigorous, and tightly organized, will spare no effort in achieving its social and economic goals, whatever the cost may be. Recent statistics do bode well, indicating a rate of economic growth well beyond their exuberant population growth. Nevertheless, we must ask whether it will be physically possible for a population, that can hardly expect to stabilize until it has gone well over the billion mark, to procure in sufficient quantity industrial raw materials, food, fuel, water, and other necessities for an advanced urban population of several hundred millions. If not, the consequences for its neighbors and the world at large are not pleasant to contemplate. We have virtually no data on economic or population events in North Vietnam during the past few years; but it should be intensely interesting to see how a Communist regime goes about remaking an agrarian society that has already achieved incredibly high population densities, is growing rapidly, and has a quite incomplete set of the resources needed for large-scale industrialization.

Urbanization might be suggested as the panacea for the population ills of Monsoon Asia. Certainly, rapid urbanization has coincided with both economic expansion and declining fertility in Western Europe, the United States, and other advanced areas. Unfortunately, urbanization *per se* does not bring about significantly lower fertility, at least not within the Asian milieu. Few groups in the world are more fertile than the inhabitants of Hong Kong, Singapore, and, if we can trust some recent Chinese figures, Shanghai. Another, more direct, approach would be a massive campaign to encourage family control, through education and publicity, birth control clinics, the dispensing of contraceptive devices, and other as yet untried schemes. Such an official campaign may well have been a factor in the precipitate decline of the Japanese birth rate. Elsewhere, the Indian government has embarked on a program to limit the number of births, but mainly on an experimental basis and thus far with no clearcut results; and the Chinese government has flirted with the notion of condoning or even encouraging birth control without yet fully committing itself to such a suspiciously un-Marxian doctrine. All such direct assaults on the population problem bear close watching and certainly seem worth trying. At the same time, it should be realized that such facts as have been gathered on the practicality of a socially engineered decrease in the fertility of an economically underdeveloped population are not encouraging. The provision of free advice and contraceptive devices or the availability of medical techniques still in the experimental or discussion stage, even the perfection of the much-heralded cheap, safe, and effective oral contraceptives are only a small part of the answer. The necessary social and psychological motivation must also be present. Reproduction patterns are closely bound to the most sacred of human values—home, family, religious sanctions, and personal morality—and, once established, are altered slowly and reluctantly. Even with the transformation of society and economy in Monsoon Asia, there would be an awkward time lag before birth rates would reflect the changes. It goes without saying that any deliberate program to increase mortality to former levels is utterly impossible not only on ethi-

MONSOON ASIA: POPULATION CHARACTERISTICS—II
(Most recent year available)

	Crude Birth Rate	*Crude Death Rate*	*Rate of Natural Increase*	*Infant Mortality Rate*	*Life Expectation At Birth (yrs.)*	*% of Pop. 0–14 Yrs. of Age*	*% Literate in Pop. 10 Yrs. and Older*
China	41.6	21.0	20.6	—	—	35.5	—
India	39.1	19.4	19.7	185	32.5	—	19.9
Japan	18.0	7.5	10.5	34.6	65.0	30.9	—
Pakistan	c.45	c.28	c.17	—	—	39.8	—
Indonesia	43.8	25.4	18.4	199.2	37.5	36.8	15–20
Vietnam	43.1	27.3	15.8	172.2	42.5	36.6	15–20
South Korea	c.42	c.18	c.24	—	—	40.8	—
Philippines	48.5	21.9	26.6	172.2	42.5	45.1	59.8
Thailand	47.1	24.1	23.0	185.7	39.1	42.3	53.7
Burma	44.5	30.5	14.0	228.9	32.5	37.1	55–60
North Korea	c.42	c.23	c.19	—	—	—	—
Nepal	c.45	c.30	c.15	—	—	39.2	—
Ceylon	38.5	14.4	24.1	133.8	52.7	42.7	63.8
Taiwan	45.9	9.6	36.3	77.5	59.2	43.4	—
Malaya	43.5	13.4	30.1	121.2	52.5	42.2	38.2
Cambodia	47.1	24.1	23.0	185.7	39.1	42.9	15–20
Hong Kong	36.6	7.1	29.5	48.3	—	—	—
Laos	46.2	29.2	17.0	228.9	32.5	40.8	15–20
Singapore	47.4	10.6	36.8	77.5	60.0	38.3	45.8
British Borneo	46.2	30.8	15.4	261.5	27.5	40.8	15–20
Portuguese India	22	13	9	—	—	—	—
Bhutan	—	—	—	—	—	—	—
Portuguese Timor	46.5	32.0	14.5	244.7	30.0	40.7	—
England and Wales	16.4	11.7	4.7	22.5	68.0	22.9	—
United States	24.1	9.4	14.7	26.4	66.3	29.6	—

cal grounds but also for political and social reasons.

The only proved method for taking a society which is replacing itself wastefully by means of high birth rates and high death rates and making it into one in which human beings are replaced more efficiently and humanely through low fertility and low mortality, is to develop its economy to a state of high productivity and high per-capita consumption. Inevitably those communities with improved living standards and the expectation of even greater personal prosperity have elected to limit the number of births to a reasonable level. In the case of Monsoon Asia, this process entails a crash program for the expansion of agricultural output so as to provide a considerable surplus of food, fibers, and industrial raw materials for the non-agricultural sectors of society, the provision of roads, schools, hospitals, and a great variety of social and cultural facilities, a massive program of industrialization, and the urbanization that would follow almost automatically. The supply of the substantial human, agricultural, minerals, forest, and energy resources needed to abolish poverty in Monsoon Asia is quite uneven, and each nation will require a plan of some flexibility designed to meet its particular promise and limitations.

The Current Outlook

I think it is quite clear, on the theoretical level, that there is no inherent reason why human ingenuity, if exerted to the maximum, cannot contrive to develop a much richer, secure, and more satisfying existence for vast numbers of Monsoon Asians, even though this corner of the world may not be as well equipped physically as some others for an advanced ur-

ban-industrial society. In the cold light of current realities, the chances for the success of such a program are not impressive. Relatively few of the national governments concerned are deeply aware of their impending population-resource crisis, and even fewer have made any concerted attempts to meet it through a long-range plan of economic and social development. Furthermore, it has only been in the past few years that any careful thought has been given in the Western world to the vast, intricate problems of socio-economic engineering involved in the deliberate metamorphosis of a nation. Immense amounts of capital are required to carry such programs to fruition; much, possibly all of it, could be raised from internal sources through extremely drastic measures, but the massive infusion of foreign capital that would be much more practical may not be forthcoming. We have already noted the regional military and political stresses that stand in the way of progress. Religious and social inertia—the grip of tradition—must also be reckoned with. But probably the worst enemy Monsoon Asia has is the calendar: the longer the wait until the large-scale modernization of a nation, the larger the population that must somehow overcome the immense gap between it and those fortunate societies that have attained economic respectability, the vaster the fund of capital resources that must be squandered to provide mere subsistence for millions of additional individuals. If this outlook sounds overly pessimistic, it is something of a consolation to realize from past experience that the soothsayer is almost never right, that the unexpected nearly always happens, and that human history has been a succession of the most unlikely miracles. Unfortunately, it will take an exceptionally large miracle to circumvent the fate that seems to lie in wait for most of Monsoon Asia.

The Contribution of the Geographer

What of the role of the geographer in the prevention and cure of the impending population crisis in Monsoon Asia? It is quite conceivable that geographers could make immense contributions in two broad areas: firstly, the collection and interpretation of a great many fundamental, but still unavailable, facts about the people, resources, society, and economy of the region and, secondly, an evaluation of the probable results, direct and indirect, of the various demographic and economic plans that desperate governments are likely to embark upon. The need for basic information about this part of the world is difficult to exaggerate. The mapless character of this paper testifies to this fact: the omission of a population map is not an oversight or evidence of lethargy on the part of author or editor, but simply a reflection of the fact that nothing suitable is currently available, and that the production of one from the materials on hand would have been a major research project. Similarly, we do not know nearly enough about soils, forests, climate, water resources, human capabilities, or man-land relationships for most of Monsoon Asia or the ways in which hundreds of physical and cultural factors have interacted through time and space to produce the highly diversified landscapes and communities we have today. Certainly we lack not only these data but also tried and tested techniques for predicting the side-effects of the various corrective schemes that are certain to be attempted. It is all too likely that many of these assaults on demographic and economic problems will focus on a rather narrow front and that the broader impact—on the biota, the economic base, or the social fabric—may be more complicated, problem-breeding, and even destructive than the outcome envisioned by the administrators of the plans. Much as geographers have yet to

learn about the potentialities of their craft, no group of scholars is better equipped to foresee the problems involved in the transformation of Monsoon Asia into a livable, viable region and to help devise ways of reaching this goal. The next few years and decades will be a period of decisions irreversibly shaping the fate of Monsoon Asia. Let us hope that geographers will be called upon to gather the necessary facts and weigh the consequences of programs whose effects will be writ large upon humanity and the earth for many centuries to come.

THE ROLE OF INTRODUCTORY GEOGRAPHY COURSES IN COLLEGE CURRICULA

ALBERT W. BROWN
Eastern Michigan University

CONSIDERABLE literature now exists which considers the correct place of geography at various levels of curricula. Still, the impact of geography upon the curricula of most colleges and universities is not nearly as great as geographers would desire. A constant review of the role of the introductory college course is therefore both important and necessary until the value of geography in basic education is accepted as widely as we would wish. If one doubts that the topic is current and constantly being subjected to critical review, one has only to look at the November, 1960 issue of *The Professional Geographer*[1] and the November, 1960 issue of THE JOURNAL OF GEOGRAPHY.[2]

Some Problems Faced by the Introductory Course

The struggle of geographers to define our discipline over the past decades has not aided the development of a widely accepted or acceptable course. Our minor disputes concerning whether we are a social or physical science, or both, our proper association with other scholars, and the evolution of geographic philosophy have all led to confusion by both geographers and our colleagues who try, at times, to understand us.

Geography has passed through several cycles within the lifetime of persons now teaching as Professor Van Cleef recalls so well in the November issue of *The Professional Geographer*.[3] The geomorphological emphasis of William M. Davis, the environmental determinism of Semple, and the social school of James and other contemporaries must all be understood to appreciate our current quandary. As a result of these different schools of emphasis existing in only a few decades, it is somewhat sad to ask mature students, such as one encounters in a college summer session, a simple question like, What is Geography? Answers will include man-land relationships, a study of the earth, of water, of rocks, of trees, of nature, of people, of latitude, of rivers, of earth-sun relationships, and how different places affect each other, transportation, conservation, how man makes a living, and what have you.

In spite of the confusion which comes

[1] Eugene Van Cleef, "Geography As An Earth Science," *The Professional Geographer*, XII, No. 6 (November 1960), 8. Earl B. Shaw, "Changing Geography," *The Professional Geographer*, XII, No. 6 (November 1960), 11.

[2] Vincent Miller, "Observations on the Goals and Methods of Regional Courses," THE JOURNAL OF GEOGRAPHY, LIX (November, 1960), 371.

[3] *Ibid.*

from this rapid evolution and change of emphases, a number of recent articles have shown agreement in broad generalization defining a desirable role for geography. One excellent statement is contained in the publication of the University of Chicago entitled, "A Half Century of Geography, What Next?"[4] In this pamphlet, Professor Wheeler states that for most people the beginning course is the terminal course. Professor Wheeler would like to see each student complete the course with a background for understanding current world problems, a perspective on landscape, and a background for other study.[5]

Helpful today are the five topics which Dr. Herbert Gross once listed as "Desired Outcomes of Geographic Education"[6] on the college level. Professor Gross included:

a. An analysis and interpretation of the landforms and climatic patterns of the world.
b. An analysis of the major natural resources.
c. An analysis and interpretation of the population and occupational patterns of the world.
d. A regional analysis of one's own community, nation, and at least one part of the world which is distinctly different from the student's personal experience.
e. A development of skills in the observation of significant phenomena in the field and use of maps.

Probably many geographers would give emphases slightly different than would Professor Gross while globes and aerial photos could be added to the last items. However, the basic pattern of outcomes listed would have fairly wide acceptance among American geographers today.

A third fine statement which should be mentioned is Professor Stanley's, "The Role of Geography in General Education," written as a committe report for the California Council of Geography Teachers.[7] The paradox of need and neglect is stressed in this article and, most important, the many misconceptions which we create for ourselves are presented with some care.

What the Introductory Course Is Not

The theme of the 46th Annual Meeting of the National Council for Geographic Education was, "Geographic Education for Better World Understanding." This title gives an insight into what an introductory course might or might not be.

We have a basic difference between a beginning geography course and a beginning course in practically every other subject. If a student admits having passed a course in chemistry, we accept a cumulative process and would not think of asking for a complex analysis of organic and inorganic substances. But few accept this sequential nature of geographic knowledge and the neophyte is expected after one exposure to know the population and location of Wadi Haifa, the reason it rains, why Germany has been involved in many wars, the analysis of landform developmental processes, the basis of Soviet strength, problems of American agriculture, and what happens to the white when the snow melts, all the while acquiring through some strange accidental process a basis for better world understanding. This may reflect an unfortunate failure of both geographers and laymen to comprehend the depth of the field, the need for exact,

[4] Department of Geography, *A Half Century of Geography, What Next?* The University of Chicago, 1955.

[5] Jesse H. Wheeler, Jr., "The Role of Geography in General Education," *A Half Century of Geography, What Next?* The University of Chicago, 1955.

[6] Herbert Gross, mimeographed material.

[7] Raymond W. Stanley, "The Role of Geography in General Education," *The California Geographer* (reprint 1960).

obtainable goals and the need for a careful sorting of the essential from the trite in response to student ability and institutional goals. The ill-conceived sequence brings to mind the beginning physics teacher who asked his class to define the universe and to give three examples.

Benjamin Fine's work[8] has indicated that American college students are geographical illiterates. An appraisal of his test items reveals an interesting pattern. Among the things students should know, according to this test, are the 1960 population of the United States; the populations of our largest city, of Brazilla, and of the smallest state; the time in London; the Great Lakes region; lapse rate; location principles of navigation; deltas; earth-sun relationships; the location of Nanking; Caribbean colonies; South American republics; sources of uranium; a product for both Lancashire and the Gold Coast; the neighbors of Yugoslavia; the Ob and Seine rivers; wheat production; Albania; and the location of the Ozark plateau. If such test items concern basic knowledge that should have been acquired in previous courses and in the life which leads to an educated person, why should we in geography worry about it? If this is legitimate geographical content, what is the unity? Miller, in the November, 1960 issue of The Journal of Geography states "more than anything else, purposeful instruction assumes unity."[9]

There appears to be a sense of frustration among those responsible for building geography sequences, if it is discovered that students do not know the multitude of detail to which they may or may not have been exposed in the elementary school. We fall into a trap here over the difference in level of sophistication of elementary school children, the curve of retention of memorized facts, and legitimate college level stimulating content.

If we use the freshman year of college to achieve sixth grade information, we will lose the good student, do nothing for the poor student, and cause grave doubts among our colleagues.

Let us look further into what the Introductory Course is not. The November, 1951 issue of The Journal of Geography contains a number of interesting articles. One[10] expresses regret over the loss of drill on "what was deemed important for children to know when they become adults." Little if anything a college freshman learns will be in date upon graduation except his intellectual curiosity, his honesty, his skill in acquiring information and his ability to avoid the pitfalls of error and deception which have plagued our decision making in the past. Geography cannot be an attempt at complete comprehension of the ever changing statistical base of the world. Many institutions have long since ceased teaching by rote memory and giving college credit for elementary mathematics and grammar. Also, the Introductory Course cannot be a tourist folder for the dilatante to prepare for a post graduation trip because "there's so much travelling today."

One more thing that the Introductory Course is not. It is not a substitute for a meaningful requirement in science for those persons who cannot pass Geology I. The unfortunate schism in geography between the physical and social schools will only get us farther and farther into difficulty. Systematic study of the physical earth can result in a necessary and valuable part of man's knowledge. Earth science may be taught logically within the Geography Department, for knowl-

[8] Benjamin Fine, "U.S. College Students Flunk in Knowledge of Geography," The Journal of Geography, L (November, 1951), 334-341.

[9] *Op. cit.* Vincent Miller.

[10] Dorothy Landy, "Need Content be Sacrificed?" The Journal of Geography, L (November, 1951), 321.

edge of the physical earth is necessary for further meaningful study and probably will not be acquired except as it is included in distinct courses in geography or as part of other geography offerings. World understanding is incomplete without a clear comprehension of the effects of glaciation, the nature of soil, vegetation patterns, and climate factors, and the like. Processes and results may be studied geographically, but of and by themselves they are not geographic. Let us be careful between what is physical geography, and what is the Introductory Course for World Understanding.

Professor Warman has listed the widening diversity in emphases which may be carried on simultaneously in the field of geography today.[11] Conservation, regions, circulations, population and urbanization, professional literature, unique differentiations, militarism, cartography, and occupational preparation are each stressed in different programs. As the field of geography appears to branch out into many aspects, is it not especially important that our beginning course be clear in its intent, and its role understood fully in the college curriculum?

What the Introductory Course May Be

An especially important job of the Introductory Course in the College Curriculum is to create a worth-while body of method and content concerned with the earth, which can be identified and accepted, on an intellectual level, by both students and our colleagues. For to paraphrase a former professor of mine—a college curriculum committee is an arena wherein faculty pressure groups test their strength and the composite is liberal education, major and minor requirements. Unless we have a widely accepted and carefully conceived Introductory Course, we will never attract the students, the faculty, and the support necessary for fulfillment of our mission in higher education.

If the Introductory Course is to be identified, it cannot present merely a series of discrete items and accomplished facts. It must rather create a framework within which the student may build an orderly fortress of knowledge throughout life. The course must leave the student with working guides for the skills and techniques of learning and understanding which lead to area and world competence. An educational program based upon understanding the world of 1960 is a fraud. For our civilization will live or die with a new desperate speed and awful finality according to our ability to comprehend, adjust to, and master the ever changing pattern of essential phenomena on the surface of this earth.

A recent publication by the United States Office of Education lists five basic skills in an article entitled, "Identification and Classroom Behavior of Gifted Elementary School Chlidren."[12] The first of five basic skills listed was "Space Conceptualization." This skill is defined as a cluster of competencies related to judging special relationships and sizes of objects and the visualization of movements in space. If this is actually one of the five basic skills along with vocabulary, number ability, reasoning and scientific knowledge, it is certainly one which is basic in the role of the Introductory Course. For the critical need today is that our students establish a clear working mental image of the world with its complex, highly interrelated and ever changing patterns. We do not need a memorized block of meaningless facts. We do need a clear conceptualization of the world wherein one may say, "I am

[11] Henry J. Warman, "Changing Emphasis in Geographic Education," National Council for Geographic Education, Professional Paper 14, 1958.

[12] United States Office of Education, "The Gifted Student," Cooperative Research, monograph 2, 1960.

momentarily lost, but I am not bewildered." Area analysis and understanding must be paramount in the conception and presentation of any geographic course rather than the memorization of discrete data. Like Wheeler, one must plunge into the beginning and possibly last course to create a realistic knowledge of the world. What, for example, does "France" mean to your students before and after an exposure to geography? What working imagery does the term reveal?

George Hoffman in his article "Geographic Illiteracy and World Responsibility" quotes a number of famous 19th and 20th century leaders on the need for greater geographic understanding.[13] Eisenhower, for example, is reported to have said in 1945 that "the nation whose leaders know the most and best geography are going to secure the peace." In spite of many authoritative statements made as to the need for geographic literacy, from 1952 to the summer 1960, I was unable to find a single entering college freshman who really deep down in his or her heart believed that the world was round. Of course, if you asked, "Is the world (a) flat, (b) square, (c) oblong, (d) round" the right answer would come. But in reality, when the chips were down, the shortest line from Michigan to Manila is south of Hawaii, there are neat eastern and western hemispheres with stolid, upright land masses spaced proportionately across a rectangle of greens, browns, and yellows, with a great Pacific blue lying between western United States and the eastern coast of Asia.

Maps are a key in identifying how a civilization interprets and contemplates the world it knows at any particular time. Will the Introductory Course leave our students with a clear understanding of what is correct and what is incorrect in the imagery of the world gained from their sporadic map usage? How often do we analyze this basic tool of geographic research, organization and understanding in terms of its limitations and pitfalls? Looking at northwest Europe at scales from 1:10,000,000 to 1:10,000, what do we learn that we shouldn't learn? Most important, perhaps, what else do we wish we knew in order to make necessary decisions? The student who engages in stimulating mental exercises while building a conceptual framework for world understanding should be able to learn and to think as an adult and to proceed through life as a responsible decision-making citizen.

The Introductory Course for world understanding must combine many of the desirable characteristics of the beginning composition course. We think and try to express ourselves in essays. If a student can organize knowledge of the complex relationships and interrelationships in synthesizing, descriptive essays, the greatest part of the battle for geographic literacy will have been won. For geography is a synthesizing subject and the ability to develop a logical synthesis upon a basis of fact must be a goal of the Introductory Course.

Few textbooks are based on a clear concept of what the Introductory Course should be. Fewer still are organized and written so that both teacher and student can see purposeful goals. One outstanding recent world text attempts to present through a series of original and worthwhile maps, the actual extent and pattern of selected phenomenon. This text is also so massive, with such a wealth of statistical material, that the geography teacher and student must select worthwhile content, organize individual presentations, and put back together a usable pattern, troublesome and unusual as all three of these procedures may be. Such a text may make a real contribu-

[13] George Hoffman, "Geographic Illiteracy and World Responsibility," Reprint from the *Eleusis* of Chi Omega, February, 1955.

tion in charting the direction for future Introductory Courses.

Finally, it is difficult to have a poor class with a good instructor. The giants in geography in the past were tremendously successful teachers, on the exciting frontier of a new subject, untroubled by the distinctive methodology or massive content which exists for all our sister subjects splintered from a common core in the past century. If we are to reach the large student body of the next few years, we cannot rely on there being even one geographical giant at each institution. We must, therefore, carefully prepare a soundly conceived, pedagogically effective, usable, and retainable Introductory Course.

The wealth of articles now available for study indicates that geographers across the country are rising with enthusiasm and ability to meet this challenge.

MAKING MEANINGLESS QUANTITIES MEANINGFUL

WESLEY CALEF
University of Chicago

If I state that someone weighs 11 stone 11 pounds, most American readers will have little notion as to whether that is the weight of an average-size child, a small man, or a giant; because, of course, few know the pound equivalent of a stone. But if given the information that a stone equals 14 pounds, an American would not apprehend the size involved until he had made a mental calculation to discover that the weight specified was 165 pounds; he must, that is, get his quantities into some units that he is experienced in using; he must use some unit that he has repeatedly compared with physical reality.

The first idea expressed in the previous paragraph—that a quantity is meaningless if the size of the unit in which it is expressed is unknown—is too obvious to need any elaboration; clearly, we obtain no idea of the mass expressed by 10 stone or 10 milligrams unless we know how big a milligram or a stone is. But the second notion—the absolute necessity of repeated experience in comparing multiple units of known size with physical quantities in order to make a quantity meaningful—is not so clearly appreciated. A few examples will make it abundantly clear. If I state that it is 95,000 inches from the hotel to the railway station, few persons will have even a vague perception of how far it is. The figure 7,920 feet will help a little, but 1.5 miles is the unit multiple that we are experienced in comparing with reality. Everyone knows a cubic inch; but what are 221,000 cubic inches of wood? Well, it's a cord of wood; which, in turn, can have meaning only for the reader who has had experience in viewing piles of wood and knowing that there were so many multiples or fractions of a cord in the pile. Measurement units not validated by repeated experience are meaningless.

Meaningless Numbers

Few of us geography teachers, however, can plead "not guilty" to the charge of continually presenting to our students quantitative statements that are meaningless to the students. We tell our students that the average size of farms in some country is 27 acres, though our urban students have only the vaguest conception of how large an acre is. Let anyone who doubts this ask his students to estimate the number of acres in (1) a football field, (2) the block in which the school is located, (3) the city in which he lives, or (4) some specified part of the

state in which he lives. Or take the students to the country and ask them to estimate the number of acres in a woodlot, a river flood plain, a farm, or a field. Another good test is to give the class a wildly erroneous value, and see if any student questions it. For example, if your city covers approximately 3,700 acres, tell the students that the figure is 75,000 acres (20 times as large), and see if a single objection is received from the class. I submit that nearly all American students, whether ten years of age or twenty, have so vague a concept of the size of an acre or multiples thereof that most quantitative statements involving acres are essentially meaningless to them.

What geography teacher or text does not state something like this: "Huge springs emerge at the base of the cliffs; the largest has a flow of 10,000 gallons per minute." Most students have a clear idea of a gallon, but they have little experience with multiples of gallons either as static quantities or as unit rates of flow. Again, the doubter can check this by asking his students to estimate the number of gallons of water necessary to fill an ordinary bathtub, the school or park swimming pool, or the number of gallons of water that their city uses each day. Precisely the same holds for bushels. Most students know what a bushel is, because they have seen numerous bushel baskets; but ask them how many bushels of wheat it would take to fill the geography room or the city auditorium, or to fill a rail car, and then ponder the implications of the tremendous spread in the answers. Precisely the same situation exists for nearly all our more familiar quantities—inches of rainfall, barrels, tons, miles per hour of wind velocity, dollars of trade, cubic yards, and the like.

One last case. We speak constantly about miles with the confident assumption that surely our students have an accurate concept of this basic linear unit. Today, however, most students are urban students, and the younger students particularly have little notion about the length of a mile. The city child's unit of measurement is the block, and particularly with shorter distances he will obtain his most accurate notion of distances when they are expressed in multiples of the block.

Under the circumstances, geography teachers seem to have three possible courses of action (not mutually exclusive). We can cease to use numerical expressions of quantity; but that appears to be a retrograde course. A second possible procedure is to continue to present numerical statements that, I have been at pains to explain, are meaningless to the student—a rather futile activity. Or, we may consciously try to endow the student with an increased perception of the physical reality that is represented by our numerical quantities. I am arguing here for this latter course.

Numerical Quantities and Reality

The process of comparing numerical quantities with reality is time-consuming because it involves observing, measuring, and calculating. It will seem worth while only if we firmly remind ourselves that it is the reality behind the numbers that we wish our students to apprehend and that without the experience of comparing the numerical quantities with reality, the numbers themselves are gibberish. Attaining a quantitative, numerical concept of reality is, of course, a lifetime occupation, and most such concepts are acquired without our being aware of it; nevertheless, the process can be sharply accelerated by conscious practice. Any numerical quantity worth while recording may necessitate comparison with physical reality; consequently, such comparisons will be called for in connection with all aspects of geography. The procedure here recommended can be illustrated by reference to some of the examples cited in the early part of this paper.

How can we give our students some conception of the significance of a flow of 10,000 gallons per minute? The quantities involved must be related to known or observable quantities. Now-a-days, almost all except the youngest students have a smattering of the solid geometry of rectangular forms. We might follow procedures of this kind. We can explain that a cubic foot of water is approximately 7.5 gallons. A bathtub five feet long, two feet wide, filled one foot deep with water, contains ten cubic feet; times 7.5 equals 75 gallons of water. If there are 10,000 homes in the city, it would require 750,000 gallons to fill one bathtub in each home in the city to that depth. The spring would take an hour and a quarter to flow that much water.

If the teacher knows the daily per capita water consumption of the local city, that figure can prove useful. Suppose it is 45 gallons per capita per day. If we multiply 45 by 50,000 persons, we get 2,250,000 gallons; the latter figure divided by 10,000 (gallons per minute) indicates that 3 hours and 45 minutes of the flow of this giant spring would supply the daily requirements of the city. Each day the spring flows enough water to supply six cities of the size postulated. Such calculations have multiple useful effects. They serve to give the students some idea about how much water modern urbanites use; what huge amounts of water are required to supply even a small city; and, finally, the students get some intelligible concept of a huge quantity like 10,000 gallons per minute.

A similar procedure may be followed with that ubiquitous quantity, the acre. A football field is 300 feet long and 160 feet wide: *i.e.*, 48,000 square feet. An acre is 43,000 square feet. A football field is a little more than an acre. A large city block may cover about 350,000 square feet, or about 8 acres. An area 5 blocks long by 5 blocks wide (perhaps a recognized sub-section of the city) obviously contains about 200 acres. Clearly, by making a number of such calculations and observations, the student will greatly improve his concept of the acre, of several acres, and of a hundred acres.

We can utilize the same quantities for additional calculations of utility and interest. The eight acres contained in our hypothetical block contain about 344,000 square feet. When an inch of rain falls on these eight acres, obviously a twelfth of a cubic foot falls on each square foot, so dividing 344,000 by 12 gives roughly 29,000 cubic feet. Multiplying by 7.5 (the number of gallons in a cubic foot) shows us that 217,000 gallons of water falls on *one city block* during the assumed rainstorm. A rainstorm of only a half-inch produces more than 100,000 gallons per block. Calculations such as these are real eye-openers for most students. Similar kinds of experiences should be presented whenever quantitative terms are introduced. It may be objected that the investigations and calculations necessary for such demonstrations are unduly time-consuming. The only possible response to such objections is the assertion made previously—unless they are made comprehensible to the student, quantitative terms remain sheer gibberish. Besides, it is not impossible that the teacher, in attempting to make quantitative expressions meaningful for the student, may sharpen somewhat his own comprehension of the physical realities expressed by quantitative terms.

THE IMPORTANCE OF GEOGRAPHY IN THE CURRICULUM*

WOODSON W. FISHBACK
State Coordinator of Curriculum
Springfield, Illinois

TODAY I would like to avert having my remarks become merely a rumble of words. Therefore, I shall try to move your organization toward some "action steps" from a curriculum standpoint, rather than make a play upon timeworn issues linked with geography in the overall context of the social sciences.

My remarks are organized around three major topics: 1) re-aligning the curriculum where greater balance is needed, especially with reference to geography; 2) building the case for more definite instruction on geographical facts, relationships with other disciplines, and skills; 3) suggestions for an action program on the part of the IGS to assure geography its rightful place in the sun of curricular offerings in our public schools.

Re-Aligning the Curriculum

There is great need for an examination of the school program in terms of curriculum balance. In our efforts to educate the whole man in today's world, we cannot condone the practice of continuing to graduate young people out of high school with a fifth grade concept of geography.

Until about 1900, geography had occupied an important place in the school curriculum as a physical science. In 1909, a committee of the AAG and NEA strongly criticized the overemphasis of the physical aspects of geography and recommended more attention to human responses in the environment. By 1914, physical geography had been largely absorbed by the rapidly increasing general science courses, and what geography remained in the high school was included in commercial geography, human geography, or world geography. Geography also declined in popularity in the junior high school during the 1920's and 1930's, its content being absorbed by the newer fusion courses.

Although there was a revival of interest in geography during and immediately following World War II, geography is no longer of importance as a separate subject in the senior high school. Today only 5-7 per cent of all students in 4-year high schools take a course in geography. Curriculum studies by Brooks on the offerings of geography in high school during the past 25 years; by McAulay at the elementary level; and in selected studies in the states of California, Michigan, and

* Summary of an address delivered at the Annual Meeting of the Illinois Geographical Society, Charleston, Illinois, May 14, 1960.

EDITOR'S NOTE: On January 12, 1961, a statewide committee was organized to prepare an Illinois Curriculum Program Bulletin on teaching Geography and Earth Science in Secondary Schools. Martin W. Reinemann, Professor of Earth Science, Northern Illinois University, DeKalb, is serving as chairman of this publication committee. The other members of the committee are Henry T. Boss, Director of Curriculum and Guidance, Schaumburg Community School District No. 54, Roselle, Illinois; Mildred I. Finney, Division of Social Sciences, University of Illinois, Navy Pier, Chicago 11; Woodson W. Fishback, State Coordinator of Curriculum, Office of the Superintendent of Public Instruction, Springfield; Robert E. Gabler, Associate Professor of Geography, Western Illinois UNniversity, Macomb; Stanley E. Harris, Jr., Chairman, Geology Department, Southern Illinois University, Carbondale; Leonard L. Hodgman, Earth Science and Geography Instructor, Joliet Township High School and Junior College, Joliet; Nelson T. Kias, Geography Instructor, Blue Island Community High School District No. 218, Blue Island; Gerald Mathis, Director of Freshman-Sophomore Guidance, Palatine Township High School, Palatine; Walter H. McDonald, President, Illinois Geographical Society, Eastern Illinois University, Charleston; and Clarence W. Sorensen, Dean of the Graduate School, Illinois State Normal University, Normal.

Nebraska underscore the decline of geography as a separate subject, the extreme variety in course offerings, and the lack of qualified teachers in this subject matter area. However, recent actions in the school systems of Chicago and Peoria seem to indicate a possible reversal of this trend.

Building the Case for More Specific Emphasis on Geographic Instruction

It is not necessary for me to go into detail about the importance of geography in the curriculum. Yet, I wish to speak about this from my work and observations in the field of education, rather than as a geographer.

In this aerospace age, geographic understandings are more important than ever before. It is essential to know about people and their countries throughout the world. Time and space relationships are of increasing significance. Climate and weather information has become more important to a mobile population. More is known about our earth—its shape, its polar areas, the depth of its oceans, the nature of its glaciers and the sun and outer space.

Although significant additional discoveries and information grew out of the IGY, this seems to be just the beginning of increased knowledge concerning the earth and the earth in space. To be able to understand news on television, radio, and in newspapers and magazines, it is imperative to have a good background in geography.

As the United States carries out its responsibilities in its position of leadership in the world, its citizens are traveling and living abroad in increasing numbers. Others go forth in the interest of defense. Those who will be stationed in one place for a year or more usually take their families with them. Tremendous numbers of Americans are now going abroad as tourists due to the ease and speed of air travel. Americans who stay home, including children, have increasing contact with people of other countries who visit the United States to study our schools, agricultural techniques, industrial and scientific developments and the American way of life, as well as those visitors who are tourists and sight-seers.

It becomes apparent that we must face up to the problem before us. I am not here to contribute more fuel to the long-debated issues of the social studies approach vs. the teaching of separate subjects. Whichever road we take as far as curriculum organization is concerned, I am ready to endorse an all-out effort to see that geography gets its proper share of emphasis. As T. Walter Wallbank recently stated, "Studying world history without geography is like trying to play chess without a board." Dr. Jonathan McLendon of Northwestern has said, "We cannot assume that the relationships between geography and history are obvious to students. They need help in understanding the relative importance of geography in human affairs and how its effect should be interpreted in history."

Selected Suggestions for Cooperative Action

Now let us consider a few "action steps" you may wish to consider as an organizational team in cooperation with interested members of the State Office of the Superintendent of Public Instruction and the Illinois Curriculum Council.

1. Revise the Illinois Curriculum Guide No. 31, *Geography for High Schools with Elementary Supplement,* published in 1946.
2. Sponsor the development of a series of special regional laboratory centers for teachers to use in late afternoon or evening seminars.
3. Conduct selected workshops in geographic education.
4. Divide the state into workable areas among your membership, and make

an analytical study of the extent to which geography is being given proper emphasis in elementary schools and in high schools.

5. Make preparation for promoting more geography courses at the Junior College level.

Summary

As you have noted, I have tried to present some factual observations about our need to restate and make clear that geography should be emphasized more in our schools. Failure to do this cheats our youth of a depth exposure to a key facet of general education in my judgment.

Likewise, I have tried to place no blame on any particular group of curriculum builders—any effort to force a sharp dichotomy between history and geography, for example, would be unwise. A balanced program depends upon a cooperative pattern of action. Working toward meaningful relationships and improved understanding of the unique contributions each discipline can make in the total education of our people is a joint responsibility.

Finally, I have made a few suggestions which I believe, if carried out, will do much to get the social science programs in Illinois off dead center and help characterize them as having more vitality in the immediate years ahead. I pledge my cooperation in ventures which may be undertaken to maintain and further develop a better-balanced and stronger educational program for our children and youth.

GEOGRAPHIC READINESS IN THE KINDERGARTEN

HELEN DeSART
Jefferson School
Mason City, Iowa

UNABELLE TRYTTEN
Thomas Roberts School
Decorah, Iowa

THE SMALL CHILD lives close to the natural world. He is fascinated by the wind, animals, and other aspects of his environment. In the kindergarten there will be numerous opportunities for the teacher to enjoy the observation and exploration of the natural and physical world with the child, and to stimulate and develop his innate curiosity. Much of the teaching of geography readiness will be incidental, but there is much that can be planned. Some topics will deal with observation of nature, some with observation of activities and people, and some with the relationship between the two. Since the kindergarten child is definitely "age-centered," one of the major problems is to help him realize his interdependence with others and to develop in him the desire and ability to work well in group situations.

The purpose of this paper is not to list all of the aims of good teaching, but rather to present a few ideas, activities, and suggestions to help develop some basic concepts about our world and to stimulate and cultivate an inquiring mind about it. These suggestions will, of course, be changed by each teacher to apply to her locale and to her group of children. Some of the basic geographic concepts for observation and discussion might be:

I. The School Environment
II. The Neighborhood
III. Seasonal Changes and Weather
IV. Earth Concepts
V. Direction
VI. Location on Maps and Globes

We begin with the school environment because the five- and six-year old child needs to feel secure in this new ex-

perience which takes him entirely out of his previous world, the home.

I. The School Environment

A. Skills: to become acquainted with: his room; his school; the playground; our helpers.

B. Understanding: entrance to kindergarten; route between school and home; location of various rooms in school; work and play areas in own kindergarten room; how other workers in school help us.

C. Suggested Activities: walk around, and, in building, become acquainted with school and grounds; use blocks, sandtable, or drawing to illustrate safest way to and from school; make a map of route taken with blocks on the floor; make a map of the neighborhood and locate each child's home with drawing or red dots with name beside it; make a map of school and put in rooms of helpers.

II. The Neighborhood

A. Skills: to learn: name of street and house number; materials used to make houses; size of houses and why.

B. Understanding: recognize difference in houses; know house numbers; know that streets cross each other; recognize location of cross walks; know that there are houses on both sides of the street; count houses; location of places of interest; awareness of relative distance; other workers in the neighborhood; our interdependence on others.

C. Suggested Activities: make a teacher-pupil plan showing a few homes, school, church, whatever is in the immediate neighborhood; take a walk, look for items in section B; notice distances from school to store and use that distance as a comparison for other distances; visit the super-market; visit the filling-station operator; visit the highway commission building (these visits would vary in each area).

III. Seasonal Changes and Weather

A. Skills: being observant; learning some simple facts and concepts.

B. Understanding: importance of the sun; living things need sun and air: plants and animals vary in appearance as seasons change; weather changes from day to day, from season to season; terms for weather; cold, cool, warm, windy, etc. Use of symbols on weather charts; influence of weather on our work and play.

C. Suggested Activities:

1) Plant seeds in three containers. Give one pot air, water and sun; one just sun; one just water; notice what happens; draw conclusions.

2) Take pictures of tree and fields as seen from our own room at four different seasons and notice changes. Have a child in picture dressed properly for the season and notice how weather affects what we wear.

3) Watch wind effects on field, tree, and grass. Feel wind on face. Go out on a very windy day, feel the wind's power by letting it push you. Note wind direction and learn to face the wind and head into it when studying about airplanes and their need to "head into the wind" when taking off. Get wind direction by watching the wind sock, the tetrahedron wind indicator for night at the airport). look for smoke from chimneys, watch the way the clouds move.

4) Watch the clouds darken before a storm, note water standing in low places on the playground, watch the birds bathing after a rain. Comment on rain or snow changing the child's plans.

5) Catch snowflakes on a wool mitten, examine them with a magnifying glass, notice their beauty, melt snow, see dirt; put some water outside and see what happens on a cold day—ask "why?"

6) Notice animals' warmer coats for winter. Bring into discussion of birds, their flight south, their return in the spring.

7) Keep a weather calendar, noting

kind of day, time of year. Use symbols, *i.e.*, little umbrella, sun, snow man, clouds to place on the calendar (Fig. 1). Have a large weather child on the bul-

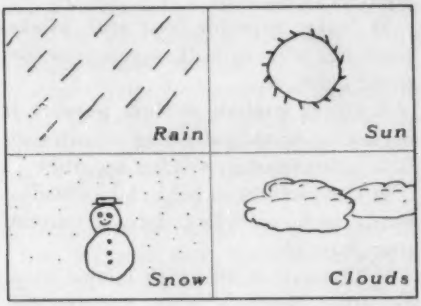


FIG. 1

letin board, as the weather changes let the children change his clothes.

8) Make charts showing how people get ready for winter, how animals get ready for winter, what birds do, and how the land gets ready for winter, trees rest, ground freezes, bulbs rest.

Have arrow or a hand attached in the center of chart. Let child turn arrow to the kind of weather we are having, and change arrow as daily weather changes.

Pictures typical of seasons: fall—raking leaves; winter—children sledding; spring—planting garden; summer—beach scene.

Weather symbols made of construction paper: fall—colored leaves; winter—snowman; spring—umbrella; summer—sun.

IV. Earth Concepts

A. Skills: to locate self on the globe; to relate self to the world; to learn to turn the globe from west to east; to use the globe and simple maps.

B. Understandings: the earth is round; the globe represents the earth which is very large; the earth turns from west to east; that day follows night; the symbols for land and water; about sun and shadow; the correct use of up and down; some concepts of what the world is like and of the child's place in it; the world changes; air is something.

C. Suggested Activities:

1) Let the child handle the globe as often as he wishes. Place a small figure on the globe to represent him, turn the globe and observe what happens.

2) Use a flashlight or small light bulb to represent the sun, and show how the earth travels around the sun. Show where the sun is when it is night in our town.

3) Discuss the kind of food he likes. Show on the globe where some of it comes from. Put small symbols on the globe such as a pineapple from Hawaii, etc.

4) Follow world news on globe, such as following the President's trip, locating stop on the globe with little airplanes, note position in relationship to child at home.

5) Go outdoors and notice shadows at recess time, at noon, compare length, note parallels of various shadows. When sun is at highest point check length of shadows. Place globe outdoors with figure on it at top and notice shadow. Note coolness in the shade of buildings and how frost lasts in the shadow but evaporates rapidly in the sun.

6) Refer to "up" as directly overhead or as the direction away from the center of the earth, "down" as toward the center of the earth (see second reference in bibliography).

7) Have an inflated balloon or volley ball bladder, large enough and strong enough for the child to sit on, to show that air is something and can hold things up.

8) Blow soap bubbles, listen for the sound as the bubble breaks and the air rushes out.

9) Show how our earth changes, by letting a strong electric fan blow across a pan of dry dirt and notice changes. Pour water on the dirt and see direction it

travels. Discuss how erosion could be prevented.

V. Direction

A. Skills: to use a simple compass; to use the terms north, south, east, and west, in directions; to be able to follow directions from a simple map.

B. Understandings: simple directions in relation to school and neighborhood; that the sun rises in the east and sets in the west; the use of a compass; meaning of weathervanes and windmills.

C. Suggested Activities:

1) Learn to use directions by saying, "birds fly south in winter," "go out the west door," "it is cold at the north pole," "the library is west of our school," etc.

2) Learn to use terms correctly by referring to "across the street," "go to the left," "go upstairs," "first floor." Note: teach about one direction at a time. Label the walls of the school room, north, south, east, west. Observe path of sun during child's time in school.

3) Have child learn to locate himself in relation to the school. Go out doors, face north by finding shadow, (with teacher's help) point to different forms or buildings and identify direction correctly.

4) Observe weathervanes and windmills and notice how they show the direction of the wind.

VI. Location on Maps and Globes

A. Skills: how to handle a globe; how to handle a simple map.

B. Understandings: that maps and globes show us where we are; that maps and globes show us where places are; that maps and globes show us land and water forms; that a symbol on a map means real landscape.

C. Suggested Activities:

1) Locate child by a figure on a globe, then locate his room on a school map, his home on a neighborhood map made by the teacher and children. Use a state map to locate his town, then a United States map to locate his state and finally a world map to locate his country. Compare world flap map and globe. Have child locate on both.

2) Make maps on floor with blocks, mark safe ways to walk, note crosswalks, traffic lights, etc.

3) Use of symbols, to show weather, is beginning of understanding of map symbols as described in weather activities.

4) Use pictures to help child visualize words such as valley, hill, mountain, river, bay, etc.

5) Illustrate stories with sample map, *i.e.,* Black Sambo's Walk, noticing different landforms; Peter Rabbit's Day; floor plan for Bear's home; Red Riding Hood's walk through woods to clearing around Grandma's house (again showing landforms); etc.

6) Make a map for a school trip to a zoo, library or farm.

7) In September have a large map on wall to locate places where children went on vacations. Use yarn and run it from location out to edge of bulletin board where child's name can be placed.

Summary

The concepts and understandings listed above are just a few that might be developed at the kindergarten level. We hope that through some of these informal activities we would begin (1) to build a concrete basis for formal geography, (2) to broaden and deepen the child's horizon, (3) to increase his knowledge and understanding of a geographic vocabulary, and (4) to help him to acquire an inquisitive attitude toward his natural and cultural environment. We would suggest, also, that it might be helpful to give the first grade teacher a list of concepts to be developed in order that she might continue to strengthen those understandings.

References for "Living in the Community" Projects

In the Neighborhood. Scott Foresman Co., Chicago, 1958. A. A trip to the Store pp. 160-115. B. The Library pp. 117-123. C. The Postoffice pp. 133-135. D. The Church pp. 63-69. E. A Map of the Neighborhood pp. 189.

Our Neighborhood. Beckley Cardy Co., Chicago, 1955. A. A Map of the Neighborhood pp. 16-17; 80-81; 146-147. B. A Bakery pp. 39-44. C. A Store pp. 45-54; 58-63; 68-71.

I Live With Others. L. W. Singer Co. Inc., Syracuse, N.Y., 1957. A. A Trip to the Farm pp. 6-21. B. The Store pp. 22-29. C. A Map of the Neighborhood pp. 56-57; 104. D. A Trip to the Fire Station pp. 62-80.

Billy's Friends. Follett Publishing Co., Chicago, 1957. A. A Trip to the Farm pp. 115-125. B. The Library pp. 105-108.

Billy's Neighbors. Follett Publishing Co., Chicago, 1957. A. Going to the Library pp. 53-62. B. The Store pp. 91-108. C. The Farm pp. 133-48.

Stories About Linda Lee. Ginn and Co., Chicago, 1960. A. Mr. Green's Farm pp. 75-93.

NATIONAL COUNCIL AT WORK

PRELIMINARY PROGRAM

THE NATIONAL COUNCIL FOR GEOGRAPHIC EDUCATION

FORTY-SEVENTH ANNUAL MEETING

Hotel Benjamin Franklin, Philadelphia, Pennsylvania, November 24, 25, 1961

Theme: GEOGRAPHY FOR THE SCHOOLS OF AMERICA

Pre-Convention Events Thursday, November 23, 1961

2:00 p.m. Executive Board Meeting ..... **Lafayette Room**

4:00-9:30 p.m. Registration ..... **Mezzanine, at head of main stairway**

4:00-9:30 p.m. Information Desk Open ..... **Independence Room**

9:00 p.m. Executive Board Meeting ..... **Lafayette Room**

FRIDAY MORNING, November 24, 1961

8:00 a.m. Registration ..... **Mezzanine, at head of main stairway**

9:15-10:20 a.m. First General Session ..... **Crystal Ballroom**

Presiding ..... Jewell Phelps
President, The National Council for Geographic Education, George Peabody College, Nashville, Tennessee

Welcome ..... Allen H. Wetter
Superintendent of Schools, Philadelphia, Pennsylvania

Welcome ..... T. Noel Stern
President, State College, West Chester, Pennsylvania

Response ..... John W. Morris
Past President, The National Council for Geographic Education, University of Oklahoma, Norman, Oklahoma

Choral Group

"Philadelphia: The City, Its Problems, and Plans for the Future" ..... Edmund N. Bacon
Executive Director, City Planning Commission, Philadelphia, Pennsylvania

10:20-10:45 a.m. Visit Exhibit Booths ..... **Mezzanine Galleries**

10:45-12:00 Noon Sectional Meetings

SECTION A EUROPE AND THE SOVIET UNION ..... BETSY ROSS "A"

Presiding ..... Robert Gabler
Western Illinois University, Macomb, Illinois

"The Two Faces of Sicily" ..... Robert S. Funderburk
Central Washington College of Education, Ellensburg, Washington

"Commercial Fishing in Norway: A Traditional Industry in Transition" .. Laurence M. Sommers
Michigan State University, East Lansing, Michigan

"Unity and Diversity in the Soviet South" ..... Jack R. Villmow
The Ohio State University, Columbus, Ohio

SECTION B TECHNIQUES IN GEOGRAPHIC EDUCATION ..... BETSY ROSS "B"

Presiding ..... Sister M. Lenore, O.P.
Catholic University of America, Washington, D.C.

"Programmed Teaching: Teaching Machines and Geographic Education" ..... J. D. McAulay
Pennsylvania State University, University Park, Pennsylvania

"Some New Trends in the Training of Professional Geographers" ..... Duane F. Marble
University of Pennsylvania, Philadelphia, Pennsylvania

"Research Tools for the Geography Teacher" ..... Lorena A. Garloch
University of Pittsburgh, Pittsburgh, Pennsylvania

SECTION C SOME NCGE ACTIVITIES IN GEOGRAPHIC EDUCATION, I ..... BALLROOM FOYER

Presiding ..... George T. Renner, III
Arizona State University, Tempe, Arizona

Report of the Curriculum Guide Committee ..... Wilhelmina Hill
Chairman of Committee, U. S. Office of Education, Washington, D.C.

Report of the Committee on Standards and Certification ..... Mary Viola Phillips
Chairman of Committee, University of Pittsburgh, Pittsburgh, Pennsylvania

SECTION D RECENT DEVELOPMENTS IN GEOGRAPHIC EDUCATION ..... LAFAYETTE ROOM

Presiding ..... Katherine Montgomery
Greensburg Public Schools, Greensburg, Pennsylvania

"Geography in the Schools and Colleges of Britain" ..... Wesley C. Calef
University of Chicago, Chicago, Illinois

"Renaissance in Cultural Geography" ..... Henry J. Warman
Clark University, Worcester, Massachusetts

"An Experiment in International Learning" ..... A. K. Botts
Trenton State College, Trenton, New Jersey

FRIDAY AFTERNOON, November 24, 1961

1:30-2:30 p.m. Second General Session ..... Crystal Ballroom

Theme: LEADERS IN GEOGRAPHIC EDUCATION

Presiding ..... Mamie L. Anderzhon
First Vice President, The National Council for Geographic Education, State College, Indiana, Pennsylvania

"Mark Jefferson" ..... Geoffrey J. Martin
Eastern Michigan University, Ypsilanti, Michigan

"Isaiah Bowman: The Man and His Views on Geographic Research and Education" .....
..... George Knadler
Principia College, Elsah, Illinois

"Geographers I Have Known: Vignettes and Marginal Gloss" ..... John K. Wright
Lyme, New Hampshire

2:30-2:45 p.m. Visit Exhibit Booths ..... Mezzanine Galleries

2:45-4:00 p.m. Sectional Meetings

SECTION A ROADWAYS OF AMERICA ..... BETSY ROSS "A"

Presiding ..... Robert N. Saveland
Ginn and Company, Boston, Massachusetts

"Denver and Rio Grande Railway: A Study of Sequent Occupance" ..... Frank H. Thomas
Southern Illinois University, Carbondale, Illinois

"El Camino Real" ..... John W. Reith
University of Southern California, Los Angeles, California

SECTION B POWER RESOURCES FOR PRESENT AND FUTURE ..... BETSY ROSS "B"

Presiding ..... Robert Redden
College for Teachers, Buffalo, New York

"Appalachian Coal: Present and Future Outlook" ..... Charles E. Weber
State College, Indiana, Pennsylvania

"Power in the Tennessee Valley" ..... Walter L. Criley
Tennessee State Planning Commission, Nashville, Tennessee

SECTION C NCGE ACTIVITIES IN GEOGRAPHIC EDUCATION II ..... BALLROOM FOYER

Presiding ..... Robert E. Cramer
East Carolina College, Greenville, North Carolina

"Basic Concepts in Geographic Testing" ..... Berenice Casper
Trenton State College, Trenton, New Jersey

"NCGE Publication Center" ..... John W. Morris
Director, University of Oklahoma, Norman, Oklahoma

"A Nationwide Program for Geography via Television: Report of Joint NCGE-AAG Committee on Geographic Education" ..... Gilbert White
NCGE Co-chairman, University of Chicago, Chicago, Illinois

SECTION D NCGE COMMITTEE ON PLANNING, OPEN MEETING ..... LAFAYETTE ROOM
Chairman: H. Phillip Bacon, Teachers College, Columbia University, New York, New York

SECTION E COLLEGE STUDENTS SECTION ..... WILLIAM PENN ROOM

4:00 p.m. Special Meeting

Gamma Theta Upsilon ..... Lafayette Room

FRIDAY EVENING, November 24, 1961

7:00 p.m. Annual Dinner ..... Crystal Ballroom
Presentation of Awards

Address: "The Physiography of Space" ..... Leo Steg
Manager, Space Sciences Laboratory, Missile and Space Vehicle Department, General Electric Company, Philadelphia, Pennsylvania

9:30 p.m. Reception ..... Ballroom Foyer
Past Presidents and Distinguished Service Award winners in receiving line

SATURDAY MORNING, November 25, 1961

7:30 a.m. Coordinators' Breakfast ..... Ballroom Foyer

Presiding ..... Herbert H. Gross
Director of Coordinators, The National Council for Geographic Education, Concordia Teachers College, River Forest, Illinois

9:15-10:45 a.m. Third General Session ..... Crystal Ballroom

Theme: PROBLEMS IN INTERNATIONAL RELATIONS

Presiding ..... Sidney E. Ekblaw
Second Vice President, National Council for Geographic Education, University of Kansas City, Kansas City, Missouri

"The United States and Latin America" ..... Donald Dyer
University of Florida, Gainesville, Florida

"The United States and China" ..... Theodore Herman
Colgate University, Hamilton, New York

"Africa: Impressions" ..... Elizabeth Eiseleu
Wellesley College, Wellesley, Massachusetts

"Summary and Implications" ..... George B. Cressey
Syracuse University, Syracuse, New York

10:45-11:00 a.m. Visit Exhibit Booths ..... Mezzanine Galleries

11:00 a.m. Fifteenth Annual General Assembly ..... Crystal Ballroom

Presiding ..... Jewell Phelps
President, The National Council for Geographic Education, George Peabody College, Nashville, Tennessee

"Our Forty-seventh Year" ..... Lorrin G. Kennamer, Jr.
Secretary, The National Council for Geographic Education, University of Texas, Austin, Texas

Financial Report ..... Elizabeth Eiselen
Treasurer, The National Council for Geographic Education, Wellesley College, Wellesley Massachusetts

Report of the Planning Committee ..... H. Phillip Bacon
Teachers College, Columbia University, New York, New York

Report of the Nominating Committee ..... Herbert L. Rau
Kansas State University, Manhattan, Kansas

Report of the Resolutions Committee ..... A. K. Botts
Trenton State College, Trenton, New Jersey

Prospects for 1962 ..... Mamie L. Anderzhon
First Vice President, The National Council for Geographic Education, Indiana State College, Indiana, Pennsylvania

FIELD TRIPS

John Bonham, Chairman of Field Trips Committee, announces the following field trips:

(1) Aero Service Corporation Plant
(2) Self-guided walk tour, "Society Hill" section
(3) Bus trip through Brandywine Valley Conservation Area
(4) Boat trip to "Gateway to Philadelphia"
(5) "Gateway to Philadelphia," land tour
(6) Bus trip through urban redevelopment areas

GEOGRAPHIC MATERIALS RECEIVED

Ruth Brindze. **All About Undersea Exploration.** Random House, Inc., 457 Madison Ave., New York 22, N.Y., 1960. 145 pages with table of contents, suggestions for further reading, index, and photographs. $1.95.

G. S. Tolley and F. E. Riggs, editors. **Economics of Watershed Planning.** Iowa State University Press, Press Building, Ames, Iowa, 1961. 339 pages with 20 articles and index, comments on the articles. $3.95.

M. B. R. Cawkell, D. H. Maling, and E. M. Cawkell. **The Falkland Islands.** St. Martin's Press, Inc., 175 Fifth Avenue, New York 10, N.Y., 1960. 252 pages with plates, diagrams and maps, appendices and index. $4.50.

U. S. Department of Health, Education, and Welfare: Public Health Service. **Clean Water: A Challenge to the Nation.** (Public Health Service Publication No. 816) U. S. Government Printing Office, Washington 25, D.C. 1961. 48 pages including table of contents, illustrations, and conference participants. $0.35.

Mary Foley Horkheimer and John W. Diffor, editors. **Educators Guide to Free Films.** Educators Progress Service, Randolph, Wisconsin, 1961. 636 pages including table of contents, title index, subject index, source and availability index, and sources having films available in Canada. $9.00.

Norton Ginsburg. **Atlas of Economic Development.** The University of Chicago Press, 5750 Ellis Avenue, Chicago 37, Illinois, 1961. 119 pages including table of contents, 48 two-color maps, 14" by 9", and tables. Cloth edition: $7.50; paper edition: $5.00.

Glenn T. Trewartha, Arthur H. Robinson, and Edwin H. Hammond. **Fundamentals of Physical Geography.** McGraw-Hill Book Company, Inc., 330 West 42nd Street, New York 36, N.Y., 1961. 409 pages with table of contents, appendix map section, and index. $6.95.

E. W. H. Briault and D. W. Shave. **Geography In and Out of School.** Clarke, Irwin & Company Limited, 791 St. Clair Avenue West, Toronto 10, Ontario, Canada, 1960. 199 pages with table of contents, plates, maps and diagrams, bibliography, and index. $1.85.

R. J. Russell, F. B. Kniffen, and E. L. Pruitt. **Culture Worlds: Brief Edition.** The Macmillan Company, 60 Fifth Avenue, New York 11, N.Y., 1961. xii and 476 pages. $7.50.

Sidney H. Gould, editor. **Sciences in Communist China.** (Pub. No. 68) American Association for the Advancement of Science, Washington, D.C., 1961. 872 pages with table of contents, tables, and author, geographical, and subject indexes. $14.00.

Mary Foley Horkheimer and John W. Diffor, editors. **Educators Guide to Free Filmstrips.** Educators Progress Service, Randolph, Wisconsin, 1961. 165 pages with table of contents and title, subject, and source and availability indexes. $6.00.

BOOK REVIEWS

William Bixby. **The Impossible Journey of Sir Ernest Shackleton.** Little, Brown and Company, Boston 5, Mass., 1960. 207 pages. $3.00.

The Impossible Journey of Sir Ernest Shackleton is a tale of human stamina and survival which staggers the imagination. Other words which could have been used for "impossible" are "incredible" and "miraculous."

In 1914, Sir Ernest Shackleton and his "team" embarked on a "cross Antarctica" project which had to wait until 1957-58 for accomplishment. Shackleton had no airplane, no radar, no snow tractors, and no bases for rescue. Sir Vivian Fuchs did. Shackleton had only a ship, sledges, sledge dogs, and a crew. He lost all except the crew. The book is a tribute to a man whose dedication to a cause made it possible for others to accomplish his goal.

HERBERT H. GROSS
Concordia Teachers College

Robert S. Platt. **Field Study in American Geography: The Development of Theory and Method Exemplified by Selections.** Department of Georgraphy Research Paper No. 61, University of Chicago, Chicago 37, Illinois. 1959. 405 pages with table of contents, photographs and maps. $4.00.

Professor Platt recognizes eight stages in the development of field study in American geography before 1930, and exemplifies them with selections from substantive studies which are "mile posts" in this development. Type 1, the exploratory traverse, is illustrated by the *Journals of the Lewis and Clark Expedition*. The *Geographical Surveys West of the 100th Meridian* exemplify Type 2, the report of area survey.

Salisbury and Alden's *Geography of Chicago* and W. M. Davis' "Experiments in Geographical Description" are presented as specimens of Type 3, explanatory physical geography; and Semple's "Anglo-Saxons of the Kentucky Mountains" serves to illustrate Type 4, explanatory human geography. Type 5, analytic economic geography, is represented by Colby's study of the Annapolis-Cornwallis Valley apple industry; and Finch's Montfort study exemplifies Type 6, geography of areal uniformity and diversity.

Professor Platt very properly uses his own Ellison Bay study to illustrate Type 7, geography of areal organization; and Sauer and Brand's "Pueblo Sites in Southeastern Arizona" is included as a specimen of Type 8, geography of culture origin and dispersal.

It is suggested that field study in American geography since 1930 has been "derivative"—based upon a combination of the eight basic types rather than upon evolution of new types—and thus examples of recent field studies are grouped in terms of the earlier type with which they are most closely related.

This is a useful compendium; its organization and the author's own comments make it stimulating and challenging.

JOHN FRASER HART
Indiana University

Christine Weston. **Ceylon.** Charles Scribner's Sons, 597 Fifth Avenue, New York 17, N.Y., 1960. 162 pages with photographs, map and index. $3.95.

Mrs. Weston, who was born in India and now lives in New York and Maine, became known by her novels and short stories set in India. She is an exceptionally lucid writer, and in this book reveals her delight and enthusiasm for Ceylon. As a result, her book is not only a rich storehouse of information, it is also the kind of book that, opened to any page, will immediately draw the reader—young or old—into the exciting island of Ceylon.

The appeal of the book undoubtedly lies in its account of the land and people. Here Mrs. Weston brings an exciting depth and perspective whether to a modern town like Colombo or to the ruins of ancient cities dating back to the 4th century B.C. Possibly the perspective is a little too long; one misses a sense of geographical region as a frame within which actual human problems—of regional planning, employment distribution and the like—must be solved today. Yet undoubtedly this handsome volume needs to be read by any one, native or visitor, who wishes to understand the origins of the Ceylonese landscape.

The author concludes with a certain note of anxiety about the political trends she discerns there. The situation is grave indeed. Though Mrs. Bandarnaike, the first woman Prime Minister, has introduced a new dash of feminine color to the usually staid governmental affairs, one need not be surprised to detect some hard lines of worry on the face of the woman who triumphantly led her dead husband's party to power in the summer of 1960. Whether her government succeeds or not, a solution of the nation's political and economic problems will have to be found if the government is not to be permanently harassed by an embittered minority.

PRADYUMNA P. KARAN
University of Kentucky

Benjamin Appel. **The Illustrated Book about South America Including Mexico and Central America.** Grosset and Dunlap, 1107 Broadway, New York 10, N.Y., 1961. 101 pages including table of contents and index. $3.95.

One wonders why the author emphasizes South America in the title when almost half the text is devoted to Mexico and the lands bordering the Caribbean.

The very readable text with colorful illustrations on every page gives interesting legendary, historical, and modern accounts of Ameri-

cans south of the United States.

Emphasis varies from country to country. In Mexico the history and customs almost obscure the economic development. The Amazon, its forests, animals, insects, and birds receives undue stress. Chile, linked with the mountain republics of Peru, Bolivia, and Ecuador, is however, treated separately in a satisfactory manner, though I doubt that altitude varies enough to account for crop variations ranging from mangoes to wheat in the Central Valley. Argentina, Uruguay and Paraguay are classed as the Pampa countries. The Pampa, defined as a treeless and grassy plain, cannot accurately describe all parts of these countries. The illustrated map, on the inside covers, adds to the misunderstanding. One country, namely Colombia, is given wholly inaccurate coverage. Much is made of the liberators, Simón Boliver and Josó de San Martín.

The junior and senior high school student will be able to acquire an elementary understanding of Latin America, though subject to some exaggerations concerning Spanish activities as well as erroneous concepts of climatic conditions and vegetation.

Annemarie Krause
Southern Illinois University

Ralph W. Andrews. **Heros of the Western Woods.** E. P. Dutton and Company, Inc., 300 Fourth Ave., New York 10, N.Y., 1960. 192 pages including a table of contents, 19 photographs, a reading list and index. $3.50.

This is a fictionalized but documented history of logging in the Pacific Northwest from San Francisco to Canada. Through vivid biographical sketches of selected lumbermen, and the reconstruction of real events in real places, it describes the development of logging from its beginnings in the 1840's through the days of the steam locomotive and donkey engine in this century.

The author has combined careful research with a talent for realistic writing to recreate the excitement and to convey understanding of big operations in the big woods. These include, for example, the felling and sectioning of giant redwoods in coastal California, construction and operation of a fifty-mile lumber flume in the Sierra Nevada, breaking of log jams on the Pit River, topping a Douglas fir spar tree in the Oregon Coast Ranges, fighting a forest inferno in Washington, skidding a log-train to Puget Sound with a twenty-ox bull team, and riding out a storm on a lumber schooner or a thousand-foot raft of logs in the Pacific. Twelve pages of old, carefully chosen and sharply reproduced black and white photographs help to tell the story.

The book is appropriate for the junior high school library, from which it can bring pleasure and profit to Junior, father and grandfather, especially perhaps to combinations of the first and last.

Clarence W. Olmstead
The University of Wisconsin

T. M. Bushnell. **A Story of Hoosier Soils** and **Rambles in Pedological Fields.** Peda-Products, 430 Russell St., West Lafayette, Indiana, 1961. 101 pages including maps, sketches and photographs. $1.50.

This pamphlet summarizes the information included in the soil surveys of Indiana. But it also does much more. Here is a discussion in exceptionally clear language of the bases for soil classification with illustrations from Indiana. It is not always easy reading but for those who are willing to put in the time it provides most of the basic material required to understand soils and soil surveys. Its maps, diagrams, tables, and photographs explain clearly how to distinguish between various soil series. The pamphlet also shows why in land-use studies such distinctions are significant.

The reviewer wishes he had had this pamphlet when as a graduate student he first attempted an understanding of soils. There are few American geographers who would not benefit by reading it. The pamphlet is also strongly recommended to elementary and high school teachers in the Middle West who teach something about soils in their classes.

Indiana University Otis P. Starkley

Elvajean Hall. **The Land and People of Argentina.** J. B. Lippincott Company, East Washington Square, Philadelphia 5, Pa., 1960. 125 pages with map of Argentina and 8 central-book pages of photographs. $2.95.

This book, one of the thirty-plus editions in the Portraits of the Nation's Series, compares very favorably with the best in the series. The author writes in a style which flows along nicely. The topics have a wide range, and probably because of this fact seem to be uneven in stature. For example, the chapter on Queer Animals should be interesting to people of many different ages, whereas the chapters entitled "Anarchy and Terror," "The Wars of Extermination," and "Road to the Casa Rosada" would have little appeal to persons under secondary school age.

On the other hand there is much material, well-told, which will fill in for the reader the intimate pictures of Gaucho life and games, family life in general, holidays, fiestas, and also little-told tales of the far-away places like Tierra del Fuego, Misiones and Patagonia. Then, too, students of Spainsh will have added to their vocabuiary, among others, such words as malon (Indian raid), tropilla (string of horses), facon (all-purpose Gaucho knife), and pulperia (a bar to which both horse and rider could sidle-up to).

As a supplementary reader the book serves its interest; as a geography book it needs more maps and fixation of places and events. But, for its low price of $2.95, it is hard to beat; and after reading it, many will agree with the last sentence that "from mutual knowledge (of Argentina) comes mutual appreciation."

Clark University Henry J. Warman

BOOK REVIEWS

H. Percy Wilkins. **Clouds, Rings and Crocodiles.** Little, Brown and Co., 34 Beacon St., Boston 6, Mass., 1955 (1960 first American edition). 148 pages with illustrations. $3.00.

How many school-age children have asked themselves, "What is it *really* like in outer space?" This question interests the junior high school pupil, for our age of orbiting sputniks has increased the desire of young people to know about "out there." *Clouds, Rings and Crocodiles* attempts to meet this need, and the text is just as intriguing as its title. As a travel book, it is literally out of this world, for the subtitle, "By Spaceship Round the Planets," directs the young reader to author Wilkins' safari into outer space.

The first section of the book is devoted to an explanation of propulsion, construction and design of the rocket ship, fabrication of a space station, and elementary celestial navigation. This knowledge is gained in 48 pages. The remaining hundred pages takes the reader to the moon, Mars, Jupiter, through the rings of Saturn and, lastly, to the icy worlds of the furthest planets. The return trip arcs the rocket around the sun to landings on the varied terrains of Mercury, Venus, and, finally, terra. Hence, the title is explained: *Clouds* (Jupiter), *Rings* (Saturn) and *Crocodiles* (Venus).

Clouds, Rings and Crocodiles is not a work of science-fiction; it is a fusion of canny speculation with known fact. The encountering by twentieth century space travelers of a possible reptilian age on Venus is interesting as well as fascinating. The author's discussion of an extinct selenite civilization stimulates much thought.

A basic space terminology has been woven into the fabric of a delightful tale. The illustrations, however, fail to meet the challenge of the text. A few Bonestell-type drawings would have done much to convey the author's concepts.

ARTHUR A. DELANEY
New Hyde Park Memorial High School
New York City

Frank Debenham. **Antarctica: The Story of a Continent.** The Macmillan Company, 60 Fifth Avenue, New York 11, N.Y., 1961. 264 pages including table of contents, list of illustrations and index. $5.50.

Antarctica, our seventh continent, so long a forgotten land and a mystery through neglect by scientists and the public alike, is at long last being discovered and described with an ever-increasing tempo of interest. This past relegation to oblivion has not been entirely complete because a few, a very few, scientists and explorers have made sacrifices there in order to wrest from Antarctica the secrets of the variant physical phenomena. The recent International Geophysical Year that included a cooperative program of

RONALD *books for geographers . . .*

A Geography of Europe

Including Asiatic U.S.S.R.

Edited by GEORGE W. HOFFMAN,
University of Texas

Second Edition. This new basic textbook first introduces the student to Europe's complex physical and historical background. It then presents authoritative geographical descriptions of its seven major regions. Throughout these abundantly mapped and illustrated discussions, the emphasis is on the interwoven strands of economic and political geography. The book presents an integrated picture of the European scene within the context of political, natural, and cultural regions.

A summary chapter assesses various regional problems and the attempts to solve them through European cooperation; brings into perspective Western Europe's struggle to regain its place in the world's economy in competition with a developing Soviet Europe. *9 Contributing Authorities. 2nd Ed., 1961. 815 pp.* $9.50

Biogeography

An Ecological Perspective

PIERRE DANSEREAU,
New York Botanical Garden

This pioneering study, based on field work throughout the world, presents a valuable synthesis of the environmental relationships of living organisms, with emphasis on the higher plants. Designed for senior and graduate courses in geography, botany, and ecology, it analyzes the components of the biogeographic community in terms of their historical setting, climatic tolerance, adjustment to habitat and one another, and genetic make-up.

The book applies uniform ecological principles to the study of plants and animals and their societies—achieving an integrated perspective which provides common ground for a penetrating interpretation of environmental complexes. *"Startling depths of insight and breadths of learning."*—THE PROFESSIONAL GEOGRAPHER. *"Clarity, precision, logical arrangement."* —SCIENCE. *1957. 394 pp.* $8.50

THE RONALD PRESS COMPANY
15 East 26th St., New York 10

investigation on Antarctica by a dozen or more nations in scientific research and exploration has paved the way for a major, joint international effort that is setting the pattern for world peace and international goodwill as well as fruitful scientific research. Prior to the IGY our knowledge of Antarctica was based on the results of expeditions of a few courageous and dedicated scientific persons, one of the most devoted of whom has been the author of this timely volume.

Emeritus Professor Debenham was born in Bowral, New South Wales, Australia; he received his undergraduate training at Sydney University and a graduate degree at Cambridge; he has held many positions of note; he was the Founder-Director of Scott Polar Research Institute (1925-1949); he is the author of many articles and books in geography and exploration; and, significantly, he was geologist on Captain Robert F. Scott's second and last expedition to the Antarctic (1910-1913). Dr. Debenham is well qualified by experience and extensive research and publication to write of Antarctica.

Antarctica, the most recent publication by Dr. Debenham, is a welcome, easy-to-read, interestingly written, refreshingly different little volume about Antarctica. The author has reviewed a large fund of sources most of which must have been found in the libary and archives of the information-packed Scott Polar Research Institute and, of course, from his own experiences. In these last several years of a spate of books and articles on Antarctica this little fact book has special merit because its subdivision into nine chapters capsulizes information by primary subject interest, such as "The Age of Sail," "A Look at the Continent," "Mind and Motive in the Antarctic," and "What's the Good of the Antarctic." Sketches, maps, and contemporary photographs add to the human interest value of the volume.

This reviewer feels that a slightly partisan pro-British emphasis has crept into the description of accomplishments. This is understandable because the British, perhaps more than any other peoples, have contributed so much to the history of exploration in Antarctica. Unfortunately, this book, first published in 1959, has not been brought up to date to include the Treaty regarding the international use of Antarctica, and the major efforts there by the United States during the past two years. This slightly partisan tinge does not detract from the fine qualities of readability and compactness of information that makes the book one of the most useful recent contributions on Antarctica.

HERMAN R. FRIIS

The National Archives
Washington 25, D.C.

Alice Fleming. The Key to New York. J. B. Lippincott Company, East Washington Square, Philadelphia 5, Pa., 1960. 128 pages with illustrations and index. $2.75.

Many teachers have found that the study of cities provides them with unique opportunities for developing major geographic concepts. The concepts of site, situation, and function, for example, can be developed in an especially meaningful fashion. In fact, some teachers report that it is in the study of a city that their students first begin to think like geographers.

The enterprising teacher is constantly searching for helpful supplementary reading material. Inasmuch as New York City is so often used as a case study in analyzing the geography of American cities, the teacher might hopefully turn to Alice Fleming's new book *The Key to New York*, one of a series about the major cities of the world.

This is a small book—128 pages of large type. Included are 24 black and white photographs. With such limited space for text, the author has a formidable task. She has chosen to use this space by looking at the historical development of New York City through the various stages of its development. Included, too, are chapters such as "Where New Yorkers Work," "Where New Yorkers Play," and "How New Yorkers are Protected."

In so far as this reviewer is able to determine, the material is factually accurate. It contains a wealth of interesting information. Nevertheless, teachers of elementary school geography are likely to be disappointed in both the approach and the style. The challenging and stimulating concepts in urban geography that are so beautifully illustrated by New York City do not come through. The book is woefully deficient in adequate maps. In fact, the sole map is a one page pictorial representation, sans scale, of Manhattan. And in a number of places the ideas, and the vocabularly selected to develop them, are scarcely appropriate for the fourth through sixth grade reader, the primary audience to whom this book is directed.

PHILLIP BACON

Teachers College, Columbia University

Gilbert J. Butland. Latin America, A Regional Geography. Longmans, Green and Company Ltd., London, England, 1960. 373 pages including maps, tables, photographs and index. $5.50.

The book is a general description of the physical and human geography of the Latin American Realm including South America, Middle America, and the West Indies. It is an up-to-date text written for the senior high school student but may be of interest to students at the college level.

The text consists first of a very short account of the history, physical environment, and resources of Latin America as a whole, and then a more detailed description of the twenty individual republics. The specific countries are not divided into sub-regions uniformly. In some cases, state boundaries are used and physical or economic criteria are employed in others. This format may be advantageous in that it makes

(Continued on page 344)

WEATHER INSTRUMENTS

Amateur and
Weather Bureau Types

Complete installations for
schools from $59.50 to $2895.00
Write for catalog

SCIENCE ASSOCIATES

Instruments/Weather • Astronomy/Teaching Aids

194 NASSAU STREET P.O. BOX 216 PRINCETON, N.J.

THE NATIONAL COUNCIL FOR GEOGRAPHIC EDUCATION

Professor John W. Morris, Director of the NCGE Publications Center, announces a new series of four-page leaflets which sell for twenty-five (25) cents each. Each leaflet is "An Inventory of Source Materials" such as books, booklets, etc., that may be secured at little or no cost. The first seven leaflets listed below are now available:

#1—Germany
#2—Switzerland
#3—Belgium, Luxembourg and Netherlands
#4—United Kingdom and Ireland
#5—France
#6—Portugal and Spain
#7—The Soviet Union

You can secure these leaflets by writing to NCGE, Box 303, Faculty Exchange, University of Oklahoma, Norman, Oklahoma.

When you write to the advertisers, let them know that you not only saw their advertisements but read the reviews and listings of their books. *The Journal of Geography* published in the May issue the 108th review to be published during this school year, September, 1960 to May, 1961.

Student membership applications may be secured from Lorrin Kennamer, Secretary of NCGE, The University of Texas, Austin 12, Texas.

NCGE meets in Philadelphia, Pennsylvania, November 24 and 25, 1961.

GEOGRAPHICAL COLOR SLIDES

WATERLOO UNIVERSITY COLLEGE
WATERLOO, ONTARIO, CANADA

ANNOTATED KODACHROME TRANSPARENCIES
UNITED STATES — EUROPE — NORTH AFRICA — CANADA

LAND FORMS — CLOUD TYPES — CITY PLANS — MAPS — LAND USE — VEGETATION TYPES, ETC.

For Use in Elementary Schools, High Schools, Universities

WRITE FOR CATALOGUE—All slides on approval

TOPICAL INDEX TO NATIONAL GEOGRAPHIC MAGAZINE
1917 to 1960

Every article by subject and region by Dewey method, redoubles value of bound or loose magazines. Classroom copies $1. Cloth bound with alph. and chron. sections $3 if prepaid. *Elmshaven Bindery, Saint Helena, Calif.*

"25th year of publication."

Mention the JOURNAL—It Assures Service

(Continued from page 342)

the student aware of the complexity of diverse geographical patterns and points out that one standard method of regional division may not be effective in all cases. Statistical summaries are found after the discussion of each country and are valuable in comparative analysis.

The book is well illustrated with over sixty pertinent maps, thirty-two carefully selected photographs, and various tables. The glossary of Spanish and Portuguese geographical terms is highly useful as the author freely and effectively introduces these terms into the textual discussion. An index and a carefully chosen bibliography are also included.

The book is easily read and provides a great deal of information for the beginning student of Latin America.

JOHN F. LOUNSBURY
Eastern Michigan University

John A. Wallace. **Getting to Know Poland.** Coward-McCann., Inc. 210 Madison Ave., New York 16, N.Y., 1960. 64 pages with 2 black and white maps, numerous illustrations, guide to Polish pronunciation, and a chronology. $2.50.

This book serves as an introduction to the land, history and peoples of Poland, a country on which very little has been written for young children. The author has successfully described, from first hand experience, the life of the Polish people, contrasting life on the farms with life in the cities, and comparing life of an American child with his counterpart in Poland. Several pages are devoted to famous Polish musicians and statesmen and their work, names well known to most children all over the world.

Of outstanding quality are the numerous illustrations. Somewhat less successful are the two maps. While little can be said either way about the general location map, the map of Poland itself is poorly drawn, confusing and full of mistakes. A few examples, as a warning to readers, will do; *e.g.*, Szczecin is Poland's newly acquired port at the mouth of the Odra (and not the German spelling Oder) and is not located many miles from the coast; the same for Gdansk which is naturally the well-known former German port city of Danzig; the lower Vistula is actually the river San. The spelling of numerous Polish names, *e.g.*, Warthe for Wartha, is faulty. All in all, too many inaccuracies to suit a geographer on the only detailed map contained in the book.

This reviewer is often asked to review books for children which invariably contain maps of the poorest quality. This is especially unfortunate in this book, in view of the excellent illustrations and the well-written and informative text.

GEORGE W. HOFFMAN
University of Texas

Elizabeth S. Helfman. **Water for the World.** Longmans, Green and Co., 119 W. 40th St., New York 18, N.Y., 1960. 213 pages with table of contents, illustrations by James MacDonald, bibliography and index. $3.75.

This book does not contain much that geographers do not already know. However, it was not designed for the instruction of geographers. As an introduction to water resources for students at the upper elementary or junior high school level, it should prove quite useful. This book is particularly suitable for use by persons unfamiliar with the subject. It points out many things which probably had not been considered by them before, and explains many things which may have previously aroused their curiosity. It provides a good introduction to man's use of and dependence on natural resources, by analyzing in some detail the problems and possibilities concerned with one of these resources—water. The book begins with simple, fundamental concepts based upon the reader's previous experience and observations, and uses this foundation to build up a more sophisticated understanding.

The major virtue of the book is the manner in which it was written to excite the interest and enthusiasm of the reader. By referring to such everyday experiences and observations as the deposit of sediment in the street by rainwater, and proceeding from them to more complex concepts of erosion and streamflow, the reader is encouraged to see, observe, and learn. A similar approach traces the development of water power from water wheel to hydro-electric turbine.

The primary objection to the book is that it stresses the physical or conservation approach to water problems rather than the economic approach. The theme of avoiding water waste is prominent throughout much of the book. While it would be impossible to cover all the fine points of water resources in a volume designed merely to be an introduction to the subject, it often happens that a person's first contact with a subject is his only one (or at any rate, the one which makes the deepest impression); and any misconceptions arising from this contact are often long-lasting. The admonition "Stop water waste," is applicable only in places where there it a water shortage; in most areas it is not a matter of great importance.

The book's chapters cover a short history of man's use of water, present-day uses and problems, and specific examples of ways in which man copes with water problems. Illustrations include a number of line drawings and two maps.

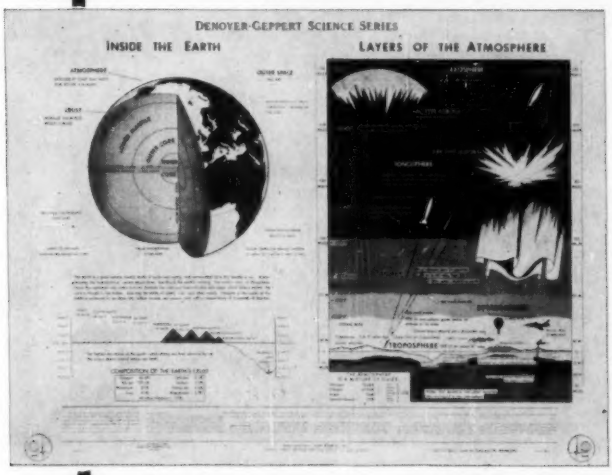
In short, the book should be a useful addition to a school library, to be used by students interested in learning more about water resource problems.

DONALD J. VOLK
Washington University

SCIENCE OF THE EARTH

Group II of New Denoyer-Geppert Science Series

12 COLORED RESOURCE CHARTS **EACH 54x44"**



DGSII-6 Inside the Earth and Layers of the Atmosphere

A Natural Integration of Science and the Social Studies

SCOPE AND PURPOSE

The visual format possesses a built-in self-teaching organization. It is possible to use the charts in the primary grades without need for children to read the text, which for upper grades provides additional information. Each chart is self-contained, with each item inter-related to every other item.

For a child seeking specific information, the charts provide great quantities of information visually arranged so the facts are presented in meaningful relationship to the topic in which they appear.

LIST OF CHARTS

1. Picture History of the Earth
2. The Earth as a Sphere
3. Relationships of the Earth and Sun
4. Maps
5. Time
6. Inside the Earth and Layers of the Atmosphere
7. Wind Systems of the Earth
8. Changing Surface of the Earth
9. Rocks and Minerals
10. Rocks and Soils
11. Water on the Earth
12. Conservation

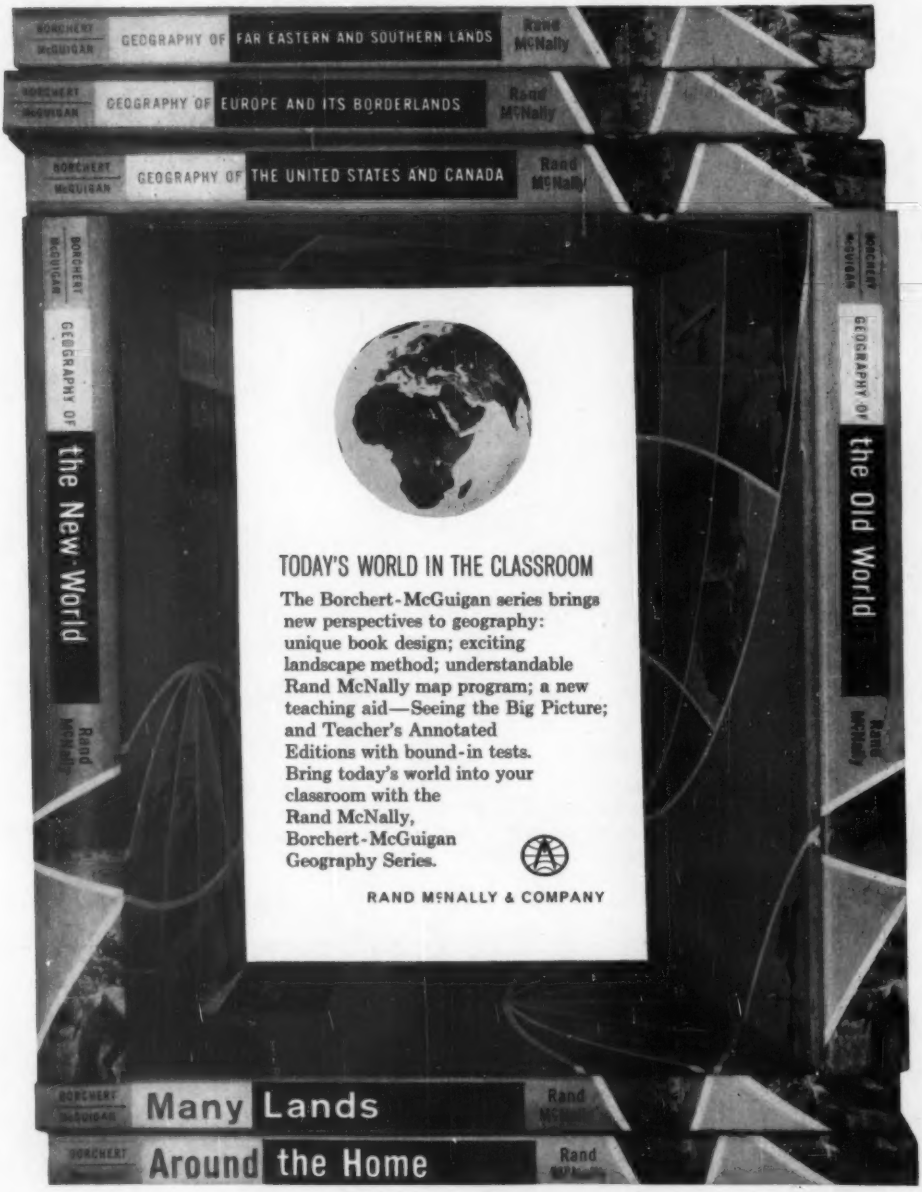
Write for Circular S31b for full details

DENOYER-GEPPERT COMPANY

5235 Ravenswood Avenue **Chicago 40, Illinois**

Deal with those who deal with us—Write Our Advertisers

GRADE 3 – Around the Home • **GRADE 4** – Many Lands • **GRADE 5** – Geography of the New World
GRADES 6, 7 – Geography of the Old World • **GRADE 5** – Geography of the United States and Canada
GRADES 6, 7 – Geography of Europe and Its Borderlands • **GRADE 7** – Geography of Far Eastern and Southern Lands


BORCHERT McGUIGAN
GEOGRAPHY OF FAR EASTERN AND SOUTHERN LANDS
Rand McNally
BORCHERT McGUIGAN
GEOGRAPHY OF EUROPE AND ITS BORDERLANDS
Rand McNally
BORCHERT McGUIGAN
GEOGRAPHY OF THE UNITED STATES AND CANADA
Rand McNally
BORCHERT McGUIGAN
GEOGRAPHY OF the New World
Rand McNally
BORCHERT McGUIGAN
GEOGRAPHY OF the Old World
Rand McNally
TODAY'S WORLD IN THE CLASSROOM
The Borchert-McGuigan series brings new perspectives to geography: unique book design; exciting landscape method; understandable Rand McNally map program; a new teaching aid—Seeing the Big Picture; and Teacher's Annotated Editions with bound-in tests. Bring today's world into your classroom with the Rand McNally, Borchert-McGuigan Geography Series.
RAND McNALLY & COMPANY
BORCHERT McGUIGAN
Many Lands
Rand McNally
BORCHERT
Around the Home
Rand McNally

Write for free Color Brochure: Education Division, Rand McNally, P.O. Box 7600, Chicago 80, Illinois

Do Your Part—Buy From Our Advertisers